MEDICAL
TIMES
Journal for the Family Physician

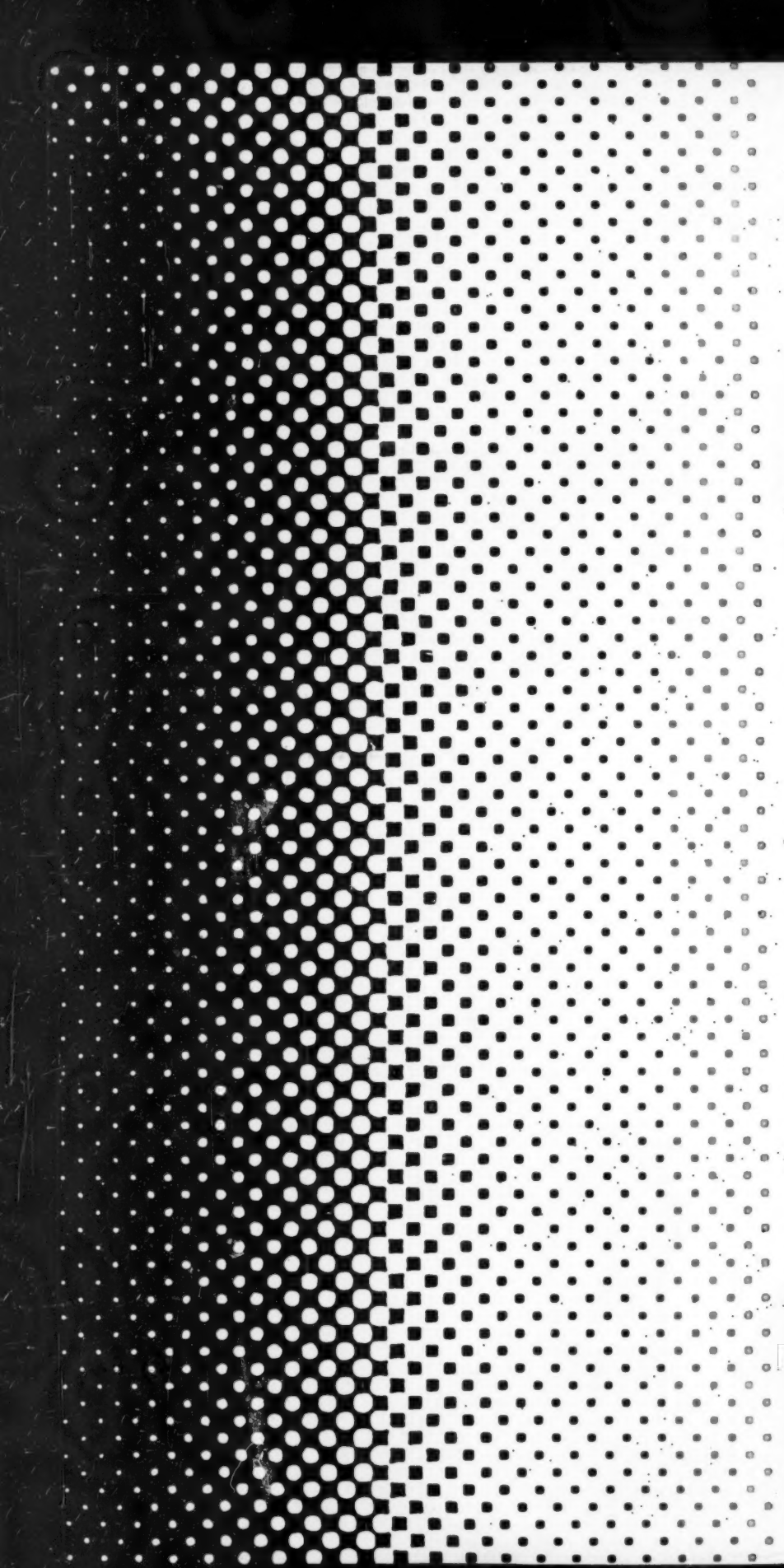
July, 1961

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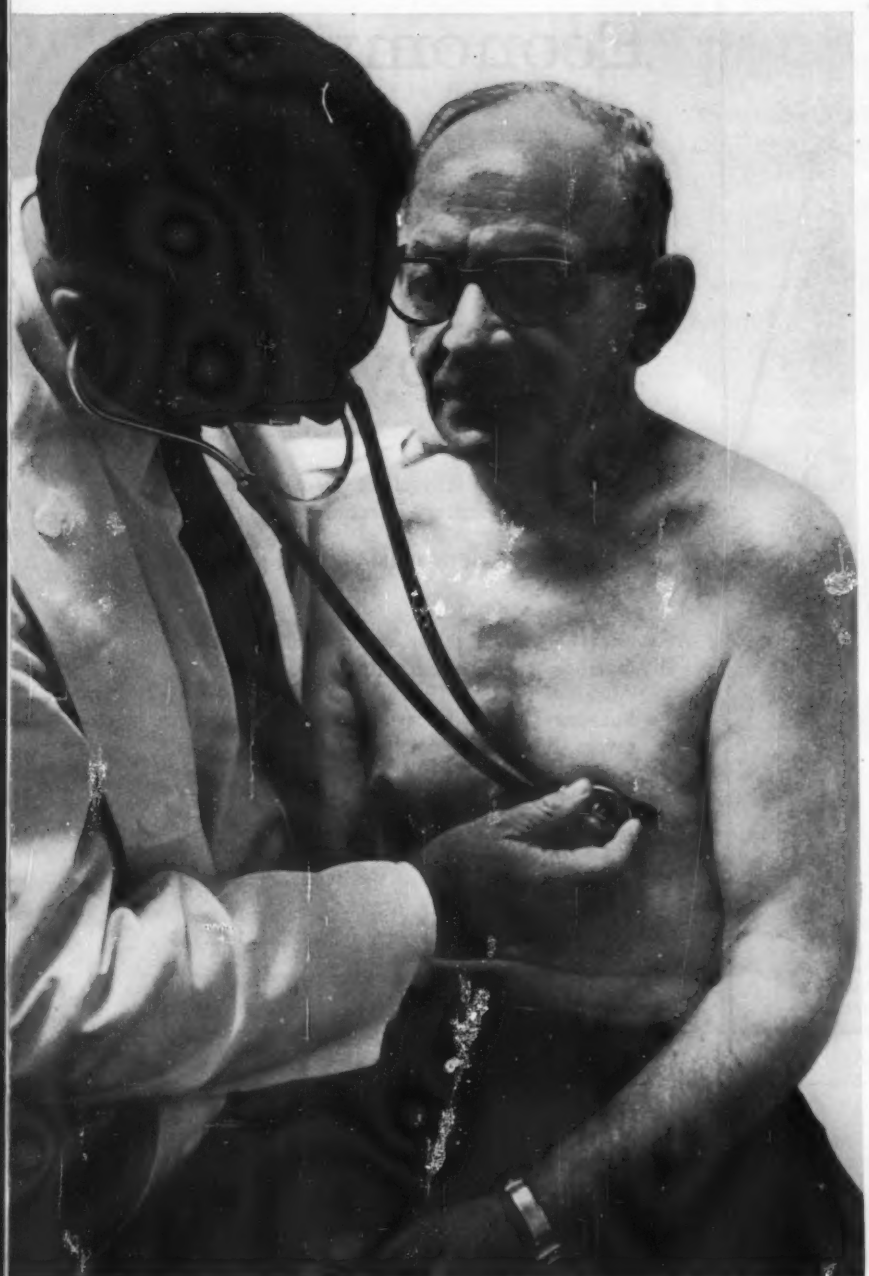
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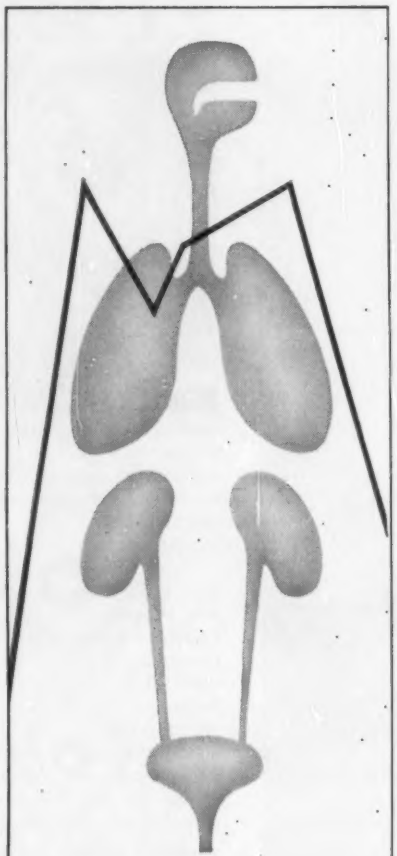


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Sleight, P.: The Lancet, P. 305 (Feb. 6) 1960 and P. 932 (April 23) 1960.

Fremont-Smith, P.: J. Am. Med. Assn. 158:366 (June 4) 1955.

Tebrock, H. E.: Ind. Med. & Surg. 20:480-482, 1951.

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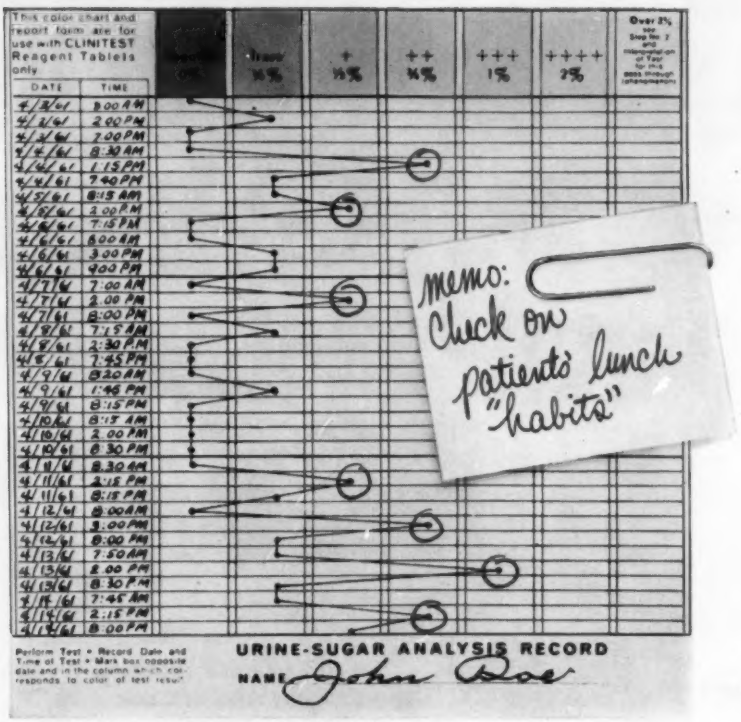
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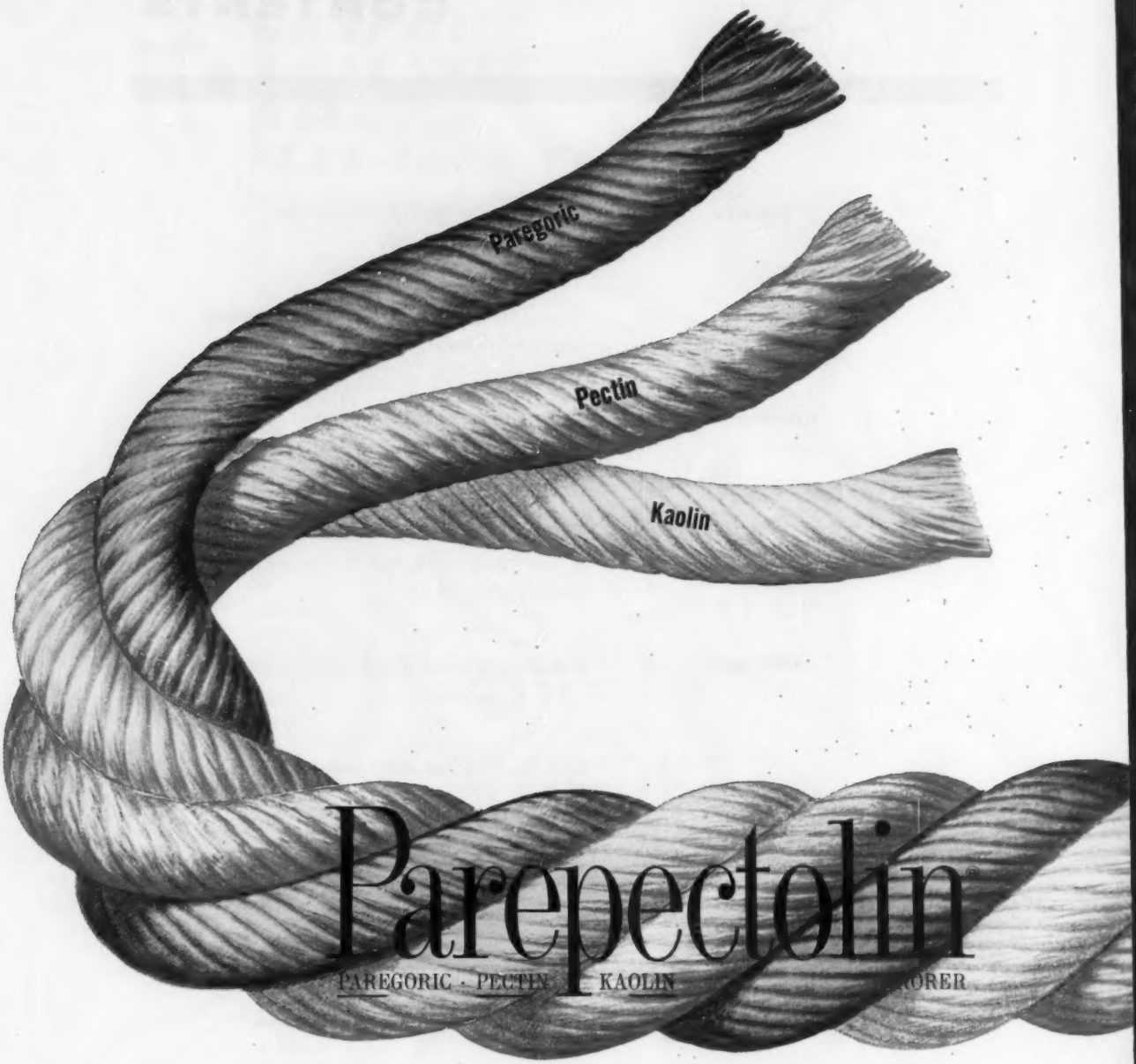
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Reference: 1. Bunim, J. J., in Hollander, J. L.: Arthritis and Allied Conditions, ed. 6, Philadelphia, Lea & Febiger, 1960, p. 364.

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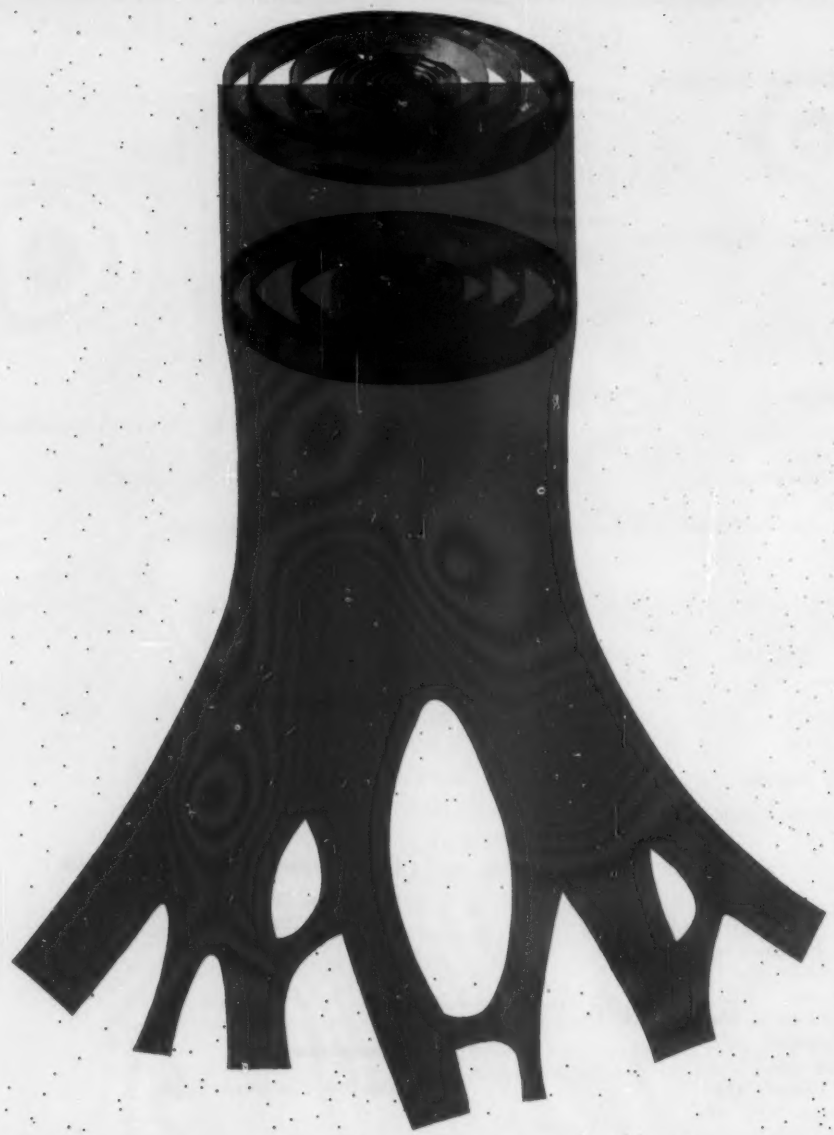
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References: 1. Ford, R. V.: Current Therap. Research 2:347, 1960. 2. Fuchs, M., and others: Current Therap. Research 2:11, 1960. 3. Ford, R. V.: Connecticut Med. 24:704-707, (Nov.) 1960. 4. Ford, R. V.: Texas State J. Med. 56:343, 1960.

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"The aim of current chemical, pharmacological, and clinical investigations of the phenothiazines is to find derivatives possessing potent and selective tranquilization with a minimum of toxic action.... In agreement with the published results of other investigators, we believe that thioridazine [Mellaril] shows a greater specificity of tranquilizing action and freedom from serious toxic effects when compared with some of the other phenothiazines."[1]

In the Menopause: A series of 150 menopausal patients were observed during Thioridazine (Mellaril) therapy for two years. Most patients had multiple complaints; the chief ones listed: tension, insomnia, depression, fatigue and lethargy, irritability, chills, hot flashes and night sweats. The author states "The results were extremely good in those patients whose chief complaint was that of insomnia, tension, nervousness and, in general, the large group of menopausal symptoms that are due to disturbances of the psyche. The sense of 'well being' afforded these patients definitely decreased the intensity of 'hot flashes' and night sweats.... Eighty-five per cent of patients complaining of insomnia, nervousness and irritability received excellent relief."[2]

Mellaril is indicated for varying degrees of agitation, apprehension, and anxiety in both ambulatory and hospitalized patients.

Usual starting dose: Non-psychotic patients – 10 or 25 mg. t.i.d.; Psychotic patients – 100 mg. t.i.d. Dosage must be individually adjusted until optimal response. Maximum recommended dosage: 800 mg. daily. Supply: Mellaril Tablets, 10 mg., 25 mg., 50 mg., 100 mg.

1. David, N. A., Logan, N. D., and Porter, G. A.: Evaluation of Thioridazine (Mellaril), a new phenothiazine, in the hospitalized patient, A.M. & C.T. 7:364, June 1960. 2. Caldwell, W. G.: Emotional Disorders in the Menopause and Treatment with Thioridazine, presented at Bahamas Conference on Internal Medicine, Nassau, Bahamas, April 30-May 6, 1961.

ORIGINAL RESEARCH SERVING THE PHYSICIAN

SANDOZ

NEW PRODUCT

End the Spin and Spell of "Dizziness"

vertigo • nausea • vomiting

impaired cerebral circulation

labyrinthine dysfunction

related conditions



• **TWO SPECIFIC ACTIONS** • **FEWER SIDE REACTIONS** New Tigacol facilitates the symptomatic control of vertigo. It relieves the varied symptoms of vertigo whether due to labyrinthitis, Meniere's syndrome, impaired cerebral circulation or of nonspecific origin. Tigacol offers you the clinically proven advantages of a well-tolerated peripheral vasodilator and a new specific antiemetic. **Roniacol** promptly relieves vertigo by directly relaxing the peripheral blood vessels without causing severe flushing or hypotension. **Tigan** controls nausea and vomiting by selective suppression of emetic impulses without drowsiness, tranquilization or adrenergic effects.

AVAILABLE: Pink capsules, each providing 50 mg Roniacol in the form of the tartrate and 100 mg Tigan HCl, bottles of 50. **USUAL ADULT DOSAGE:** One or two capsules three times daily. **NOTE:** Side effects were virtually absent except for a few instances of flushing and an occasional case of skin rash, which disappeared when medication was withdrawn. There are no known contraindications, but as with any new drug, patients should be observed periodically while on Tigacol therapy.

RONIACOL® — brand of nicotinyl alcohol • TIGAN® — 4-(2-dimethylaminoethoxy)-N-(3,4,5-trimethoxybenzoyl)benzylamine

ROCHE LABORATORIES • Division of Hoffmann-La Roche Inc • Nutley 10, New Jersey

TIGACOL

when the complaint is "dizziness"



Off the Record...

Contributions describing actual and unusual happenings in your practice are welcome. For obvious reasons only your initials will be published. An imported sculptulite figurine . . . an amusing caricature of a physician . . . will be sent in appreciation for each accepted contribution.

Safe with Grace

As a medical student assisting part-time in a doctor's office, I chanced to listen in on a conversation between the doctor's wife and the 68-year-old maiden lady who cleaned the examining rooms for my 35-year-old boss.

It seemed that little old Grace's best friend (aged 70) had accused her of making passes at the friend's husband (aged 75).

"You know I ain't that kind of a woman," Grace wailed to the doctor's wife. "Why, the doctor and I been here lots of times all by ourselves and we never done a thing!"

R. A., M.D.
Iowa City, Ia.

Always the Lady

She was old and she was diabetic. When I arrived at the isolated house to check her "painful piles," the daughter who had telephoned me was gone and the patient was alone.

After talking to the elderly lady and waiting for what seemed an interminable length of time for the daughter's return, I decided to go ahead with the examination.

When I asked my patient to remove her undergarments so I could check her hemorrhoids, she promptly replied, "I have no pants on, Doctor. I must put them on."

I assured her that this was not necessary and for her not to bother, because I could get on with the examination. However, nothing would do but that she put her pants on first, and she disappeared into an adjoining room. Soon, hearing considerable noise, I went in to see how the old woman was making out.

She was struggling desperately with her apparel. Noting that one of her high heels was caught in the pants, I hoisted her long dress and steadied her while she put them on. We succeeded.

Then she promptly removed her underwear —smiled triumphantly—and we proceeded with the examination.

J. W. D., M.D.
Memphis, Tenn.

Potent When Mixed

"You know, Doc," said my patient, "different girls are like different drinks—separately they can give you a real lift, but mixed, an awful headache. That's what I got now, an awful headache."

D.W.K., M.D.
St. Paul, Minn.

The Full Treatment

Some years ago a man brought his wife to the office and proceeded to tell me at great length about her troubles. She didn't say a word—no doubt through the years her husband's garrulity had made her abhor the spoken word. At any rate, it appeared there had been some irregular menstrual bleeding, and I performed the usual pelvic examination. The husband stood alongside me the whole time, chattering throughout the examination.

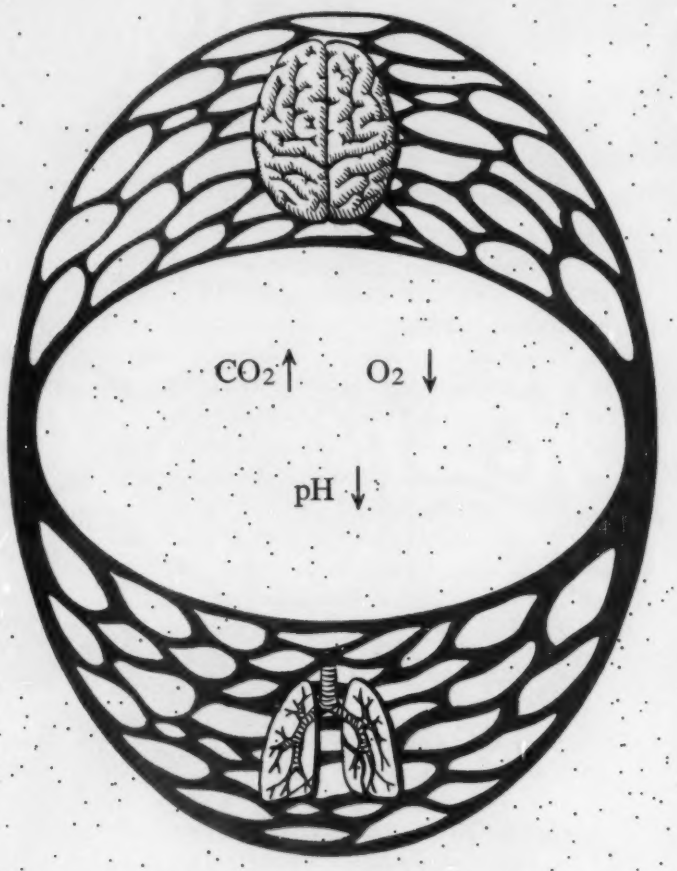
I must admit the man put me on edge. After completing the examination and prescrib-

Concluded on page 29a

in respiratory disease

the uniquely selective respiratory stimulant

before therapy



these patient-complaints...

fatigue
somnolence
drowsiness
lethargy
mental confusion
irritability
personality changes
muscle weakness

in these clinical situations...

■ Frequent or refractory upper respiratory infectious or allergic disorders ■ Chronic bronchitis ■ "Heavy smoker's syndrome" ■ Geriatric degenerative changes ■ Cardio-pulmonary disease (Cor pulmonale) ■ Chest cage abnormalities ■ Long exposure to occupational irritants; smog

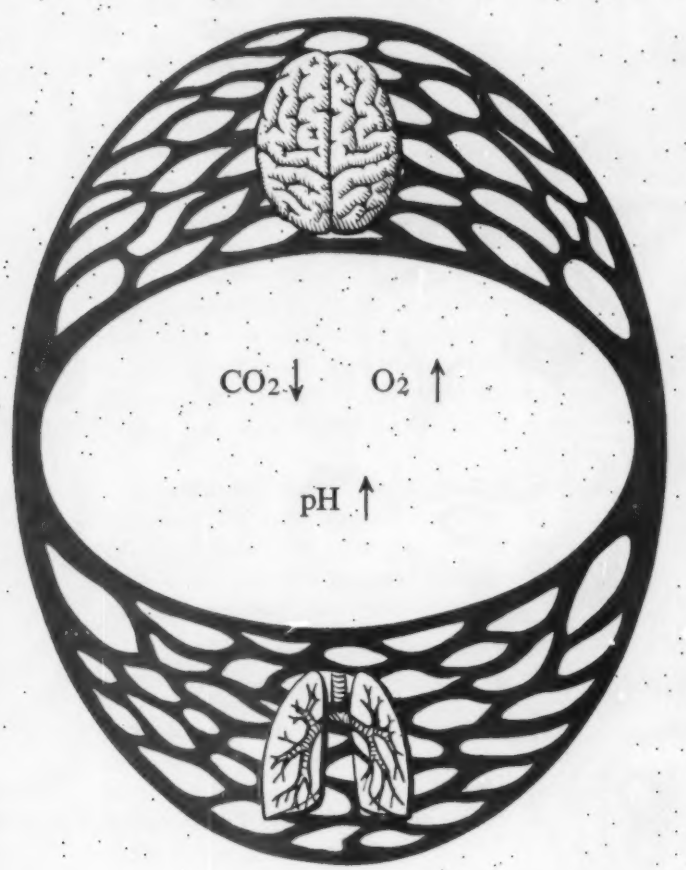
NOTE: EMIVAN VENTILATES. The effectiveness of EMIVAN is dependent upon a patent airway. Therefore, bronchodilators, corticosteroids, antimicrobials and wetting agents should be employed as required to treat the underlying pulmonary disorder.

DOSAGE: To initiate therapy, 1 or 2 EMIVAN Tablets t.i.d. (Consult product brochure for complete dosage, administration, side effects, precautions and contraindications). ■ SUPPLIED: EMIVAN Tablets (uncoated providing 20 mg. vanillic diethylamide), bottles of 100 and 1000.

NEW... EMIVAN® TABLETS

brand of ethamivan

for treatment of symptoms of CO_2 accumulation



with Emivan

are often the result of CO_2 accumulation...

Consider that their specific complaints may be the consequences of CO_2 retention *(hypercapnia)* and secondary reduced oxygen saturation *(hypoxia)* due to hypoventilation.

and can be alleviated safely with EMIVAN

EMIVAN selectively stimulates the medullary respiratory center to increase the *depth* of breathing and (to a lesser extent) the *rate* of breathing . . . *without* cardiovascular side effects, neurological damage, or secondary post-stimulatory depression.



For the emergency treatment of the comatose or severely depressed patient (when due to depressant overdosage or severe pulmonary involvement): *INTRAVENOUS EMIVAN, can be life-saving*



U.S. VITAMIN & PHARMACEUTICAL CORP.
Arlington-Funk Laboratories, division
800 Second Ave., New York 17, N.Y.

allergy-free for months



with a one week course of daily injections

Whether it is pollinosis, rhinitis due to other inhalants, allergic asthma, asthmatic bronchitis in children, eczema, or food sensitivity . . . regardless of the number or nature of the offending allergens . . . a daily injection of Anergex for 6 to 8 days usually provides prompt relief that persists for months in most patients.

Anergex is nonspecific in action. Its effectiveness against most allergens eliminates skin testing and long drawn-out desensitizing procedures. In contrast to the antihistamines and other drugs that provide only temporary symptomatic relief, Anergex induces a prolonged allergy-free state.

Marked improvement or complete relief has been reported in over 70 per cent of more than 5,000 patients*. Anergex appears more effective when given during exposure to the offending allergens. Relief is prompt; the patient "often feels better by the time he has had 3 or 4 doses"*. Anergex is safe; no systemic reactions have ever been reported.

Available: Vials of 8 ml.—one average treatment course. Each ml. contains 40 mg. specially prepared extractive substances obtained from the Toxicodendron quercifolium plant.

*WRITE FOR LITERATURE AND REPRINTS

ANERGEX®

the new concept for the treatment of allergic diseases

MULFORD COLLOID LABORATORIES MULFORD PHILADELPHIA 4, PENNSYLVANIA

PATENT APPLIED FOR

Concluded from page 25a

ing, I dismissed the pair with a distinct feeling of relief.

A few hours later I was engaged with another patient when the phone rang. It was the husband. He wanted to know how long he was to leave that "thing" in his wife.

I realized, with a sinking feeling, that I had failed to remove the large Graves Speculum.

"I tell you," hubby said, "it wasn't easy for her to walk home."

"No I guess it wasn't," I said, wondering what in the world to do. Finally, in calm a voice as possible, I told him that the instrument would not have to be in much longer. He should remove it in another half-hour. I also told him I was sorry that I had forgotten to give him those instructions when he was at the office.

The next day the fellow dropped by the office with the speculum and explained he'd had no difficulty in removing it. He then thanked me and said that the treatment had made his wife feel very much better.

Anonymous

Suck a Lemon

A severe sort throat and otitis media downed five-year-old Stevie with a high fever and the usual accompanying symptoms. While he was recuperating I continued to inspect his ears, which slowly improved.

On one visit I asked him how his ears felt. "Well," he said, "every time I swallow, my ears hiccup."

S. W., M.D.
Brooklyn, N. Y.

Paging Fallopius

A few years ago I moved into a new office and, of course, got a new phone. It wasn't until months later that I learned that my number, except for one digit, was the same as that of a hi-fi repair shop down the street.

One afternoon a man called and asked if I could come over right away.

"What seems to be the trouble?" I asked.

"I think it's with my tubes. They're over a year old and I've played the set a lot."

I was distinctly puzzled, to say the least, but I decided to go along with it a bit further.

"What makes you think it's your tubes? What are the symptoms?"

"Well, he said, "sometimes the sound is blurred, and sometimes the volume jumps up and down. Doesn't that sound like it's the tubes?"

I laughed and agreed. I explained he'd gotten the wrong number and added, "That kind of tube I can't fix."

A. F., M.D.
New York, N. Y.

Silly Question

Recently a patient with whom I was not very well acquainted phoned me and reported her two daughters, Mary and Peggy, were both ill with sore throats. The woman requested that I phone the pharmacist for medicine for them.

I asked for the girls' ages and was told that one was seven, the other eleven.

Then I asked which was the oldest of the two, and the woman replied, "The one that is eleven."

J. D. G., M.D.
Austin, Tex.

Old X-ray Eyes

This little story concerns the movie actress who, some months ago, was seriously ill and had to have a tracheotomy. Her illness and subsequent recovery were widely covered in the newspapers. Not long ago this actress appeared on the television program covering the Academy Awards, and the next morning the nurses in our office were discussing the show.

One nurse observed: "I saw her last night and I looked as closely as I could — but I couldn't detect her episiotomy scar!"

F. M. F. M., M.D.
Peoria, Ill.

STEROIDS: FAR FROM ROUTINE THERAPY IN RHEUMATOID ARTHRITIS. "... it would now appear that the steroids should be employed infrequently in rheumatoid arthritis, and, when used, long-continued therapy should be avoided and the dosage reduced to the lowest possible level." [New and Nonofficial Drugs 1961, Philadelphia, J. B. Lippincott Co., 1961, p. 598.]

PLAQUENIL: EFFECTIVE LONG-TERM THERAPY THAT SPARES STEROIDS. Many physicians are now evaluating Plaquenil, the non-steroid antirheumatic of choice. Quite simply, Plaquenil provides conservative, safer, long-range management of rheumatoid arthritis. While the steroids often result in dramatic short-term improvement, Plaquenil affords a more practical, lasting solution to the long-term problems of this long-term disease, and makes it possible to utilize steroids sparingly. □ This is how: Full steroid dosage may be necessary only during the "latent" period of Plaquenil's cumulative action. Since two to four weeks may elapse before Plaquenil-treated patients experience subjective improvement, and six to twelve weeks before objective benefits are noted, it is advisable to maintain adequate steroid dosage when indicated—but only when indicated—during this time. Thereafter, as Plaquenil exerts greater therapeutic effects, steroid dosage may be reduced gradually. Salicylates too may be withdrawn as the need for adjunctive analgesia is diminished. □ The rheumatoid arthritic patient is then continued on Plaquenil; generally, no additional medication is required. Once improvement has been achieved, it can usually be maintained, since Plaquenil is the best tolerated of the 4-aminoquinoline compounds used in rheumatoid arthritis.

in rheumatoid arthritis

IS THIS THE ERA OF STEROID DISENCHANTMENT?

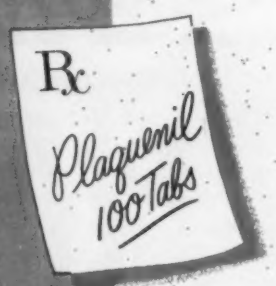
MAJOR IMPROVEMENT IN 60 TO 83 PER CENT OF PATIENTS. Clinical experience has shown that after six to twelve months of continuous administration, Plaquenil causes major improvement in 60 to 83 per cent of patients: subsidence of the active inflammatory process, diminution of joint effusion, slow fall in sedimentation rate, gradual rise in hemoglobin, relief of pain and tenderness, increased mobility, improvement in muscle strength, increase in finger dexterity, improvement in flexion deformities, diminution or disappearance of swellings and rheumatic nodules. There is a low incidence of major relapse following attainment of maximum improvement. □ Plaquenil sulfate, 200 mg. tablets. Initial dose: 2 or 3 tablets daily. Maintenance dose: 1 or 2 tablets daily. Write for booklet containing complete clinical experience, side effects, precautions, etc. □ When the patient also requires analgesia, Plaquenil with aspirin is available as Planolar (Plaquenil 60 mg. with aspirin 300 mg.).

SUMMARY OF PLAQUENIL ADVANTAGES:

PLAQUENIL ... is not a steroid
... provides conservative therapy
... affords lasting benefits
... spares steroids
... is generally well tolerated

PLAQUENIL ... acts cumulatively
... reduces need for steroids
... reduces need for analgesics
... works in conjunction with both steroids and aspirin

PLAQUENIL ... produces major improvement in 60 to 83 per cent of patients
... results in a low incidence of major relapse





Plaquenil®

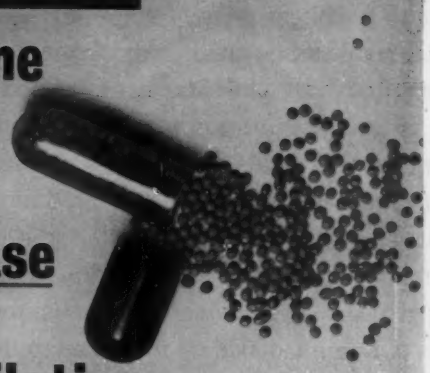
SULFATE

NON-STEROID ANTIRHEUMATIC FOR SAFE, LONG-TERM THERAPY

Winthrop LABORATORIES
New York 18, N. Y.

Plaquenil (brand of hydroxychloroquine), trademark reg. U. S. Pat. Off. Planolar, trademark.

for the first time adequate iron in convenient sustained-release form for more efficient assimilation



Mol-Iron Chronosules™

Sustained-release capsules

for improved treatment of iron-deficiency anemia

Each Mol-Iron Chronosule contains the equivalent of 80 mg. elemental iron. Gradual dosage release means greater patient tolerance — minimizing G.I. disorders. Marked increases in hemoglobin and hematocrit levels through sustained liberation of more absorbable Mol-Iron. All the advantages of specially processed Mol-Iron — now in the form most conducive to efficient assimilation.

Dosage: Adults — one Mol-Iron Chronosule daily. In severe anemia, one Chronosule twice daily. Children — one Mol-Iron Chronosule daily.

Supplied: Bottles of 30 Chronosules.

Complete information concerning the use of this drug is available on request.

White

WHITE LABORATORIES, INC., Kenilworth, New Jersey



Diagnosis, Please!

Edited by Maxwell H. Poppel, M.D., F.A.C.R., Professor of Radiology
New York University School of Medicine
and Director of Radiology, Bellevue Hospital Center

Sixty-five-year-old male with dysphagia and marked loss of weight for five months.



Which is your diagnosis?

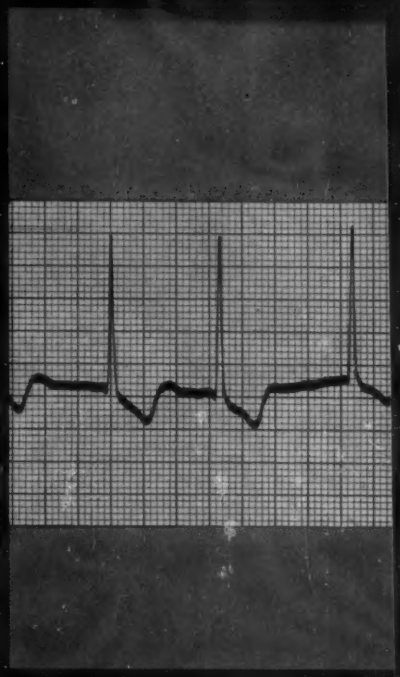
1. Ca. of esophagus
2. Esophageal varices
3. Impaction of food
4. Esophageal spasm

(Answer on page 206a)

*before treatment**



Cardiac enlargement and pulmonary congestion.

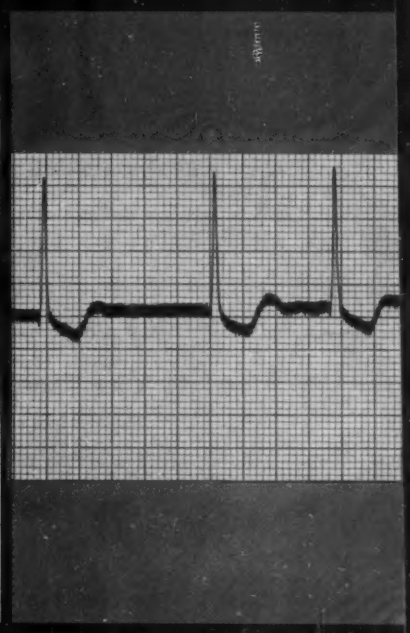


Left ventricular strain and hypertrophy (ST depression in Lead V4).

after one month on HYDROPRES*



Reduction in heart size and clearing of congestion.



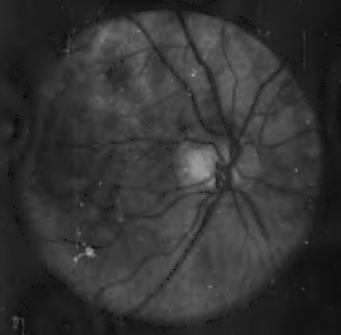
Changes toward normal (less ST depression).

*case report

effective by itself in many hypertensives...
indicated in all degrees of hypertension

HYDROPRES®

HYDRODIURIL® HYDROCHLOROTHIAZIDE with RESERPINE

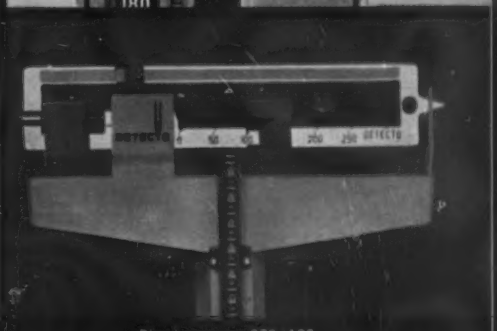


Hypertensive retinopathy with hemorrhages.

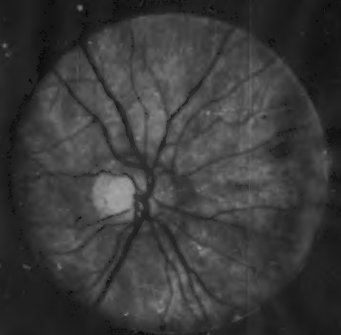


Liver palpable 5 fingerbreadths below costal margin.

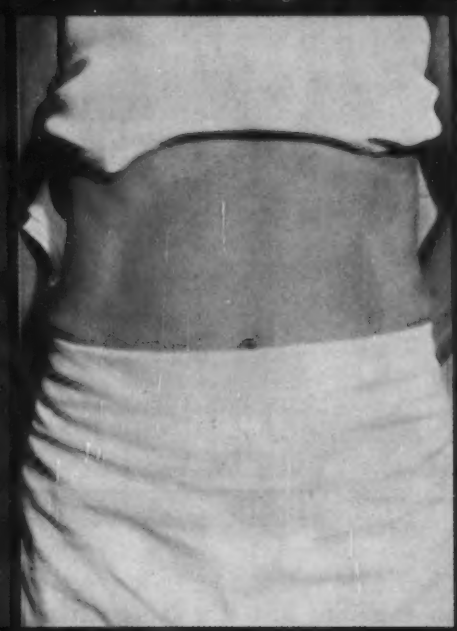




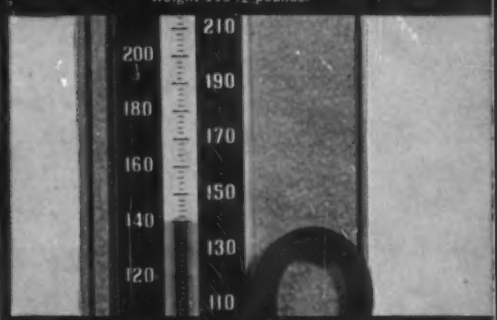
Blood pressure 270/120.
Weight 110½ pounds.

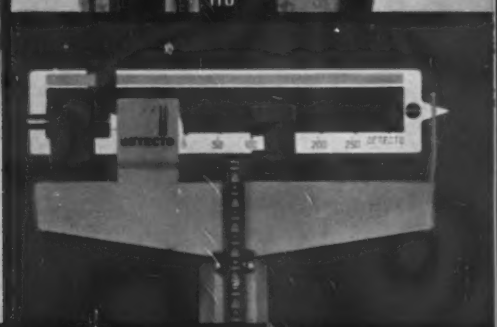


Very little change.



Liver not palpable.





Blood pressure 140/72.
Weight 105 pounds.

HYDROPRES-25

25 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine per tablet. One tablet one to four times a day.

HYDROPRES-50

50 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine per tablet. One tablet one or two times a day.

also available:

HYDROPRES-Ka†-25

25 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine, 572 mg. potassium chloride (equivalent to 300 mg. potassium) per tablet.

HYDROPRES-Ka†-50

50 mg. HydroDIURIL hydrochlorothiazide, 0.125 mg. reserpine, 572 mg. potassium chloride (equivalent to 300 mg. potassium) per tablet.

It is essential to reduce the dosage of other antihypertensive agents, particularly the ganglion blockers, by at least 50 per cent immediately upon addition of these agents or of HYDROPRES Tablets to the regimen.

Before prescribing or administering HYDROPRES, the physician should consult the detailed information on use accompanying the package or available on request.

MSD MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

†HYDROPRES, HYDROPRES-Ka, AND HYDRODIURIL ARE TRADEMARKS OF MERCK & CO., INC.

HYDROCHLOROTHIAZIDE



relieves rigidity
and reduces muscle spasm
in the
parkinson patient

PHENOXENE™

a new synthetic compound

"Chlorphenoxamine (Phenoxene) exerts a gentle yet potent action . . . a muscle relaxant action also an energizing and stimulating action, without induction of excitement or agitation. Patients are able to move faster and more freely and with greater strength and longer endurance. It helps to loosen rigid muscles, and it successfully counteracts akinesia, tiredness, and weakness."*

*Doshay, L. J., and Constable, K.: Treatment of Paralysis Agitans with Chlorphenoxamine Hydrochloride, J.A.M.A. *170*:37 (May 2) 1959.

A REPRINT OF THE COMPLETE ARTICLE AND CLINICAL TRIAL SUPPLIES ARE AVAILABLE ON REQUEST.

PM PITMAN-MOORE COMPANY
DIVISION OF THE DOW CHEMICAL COMPANY, INDIANAPOLIS 6, INDIANA

MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.
†HYDROPRES, HYDROPRES-Ka, AND HYDRODIURIL ARE TRADEMARKS OF MERCK & CO., INC.

Carnalac meets the medical preference for the
evaporated milk formula...
in a convenient, ready-prepared form.



Carnalac is Carnation Evaporated Milk with its added Vitamin D, plus carbohydrate.

A properly proportioned formula is assured, even when Carnalac is prepared by the inexperienced young mother. She just adds water in the amount you recommend.

The proven nutritional value of evaporated milk formulas is assured with Carnalac. A history of many years of successful feeding with evaporated milk makes it the most widely used form of milk for infant feeding today.

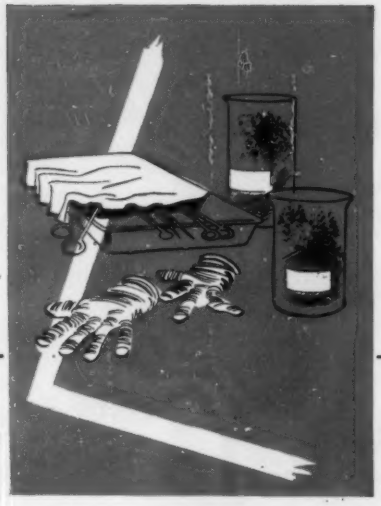
Digestible, safe, uniform, stable. Carnalac is the same prescription quality as Carnation – the milk used in more hospital formula rooms throughout the world than all other brands combined.



Diluted 1:1, Carnalac provides 7.1% carbohydrate, 2.8% protein, 3.2% fat, 400 I.U. Vitamin D per reconstituted quart, 20 calories per fluid ounce.



WORLD'S LEADER BY FAR, FOR INFANT FORMULA FEEDING
"from Contented Cows"



Coroner's Corner

A beautiful imported German apothecary jar will be sent to each contributor of an unusual case report.

Bill Jones was an odd-jobs worker in a small village, and lived in an abandoned one-room blacksmith shop. Bill's frequent excessive use of alcohol was widely known throughout the community.

The unusual sight of an electric light burning late in the morning in the residential part of Bill's quarters caught the attention of his nephew. Finding the door locked, the nephew looked through the window and saw his uncle lying face down on the floor. He forcibly gained entrance, and discovering that his uncle was dead, he summoned me, the coroner.

During my investigation, I questioned the deceased man's brother, who stated that he had repeatedly warned Bill that he would surely come to a bad end during one of his alcoholic binges.

Examination showed that Bill's left foot was stuck in an empty paint bucket, and his flexed right elbow was likewise stuck in a somewhat smaller bucket. There was a massive contusion of the forehead.

Autopsy revealed a severe intracranial injury sufficient to produce death. Chemical analysis showed that the blood contained no alcohol. Thus the deceased was entirely sober at the time of his death. The coroner's jury reconstructed the case about as follows:

Bill arose early in the morning, presumably for the purpose of passing some urine. In the dark part of his room he inadvertently stepped into an empty paint bucket. He tripped and fell heavily, striking his head on the concrete floor. In falling his flexed right elbow became caught in the smaller bucket. He died from the intracranial injury.

The coroner's jury ruled the case an accidental suicide, by literally "kicking the bucket."

J. L. C., M.D.





after eleven million treatment courses*... consistently broad antibacterial action

brand of nitrofurantoin

Furadantin®

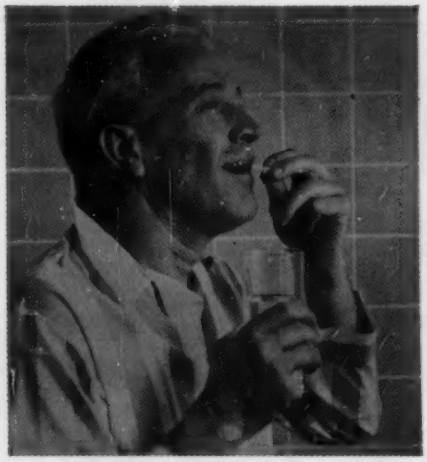
through the years...consistently broad antibacterial action against urinary tract pathogens—"It was interesting to observe that nitrofurantoin [FURADANTIN] showed a consistent in vitro effectiveness against the bacteria tested throughout the four year period, thus revealing negligible development of bacterial resistance, if any, through the years." Jolliff, C.R., et al.: Antibiot. Chemother. (Wash.) *10*:694, 1960.

*Conservative estimate based on the clinical use of FURADANTIN tablets and Oral Suspension since 1953.

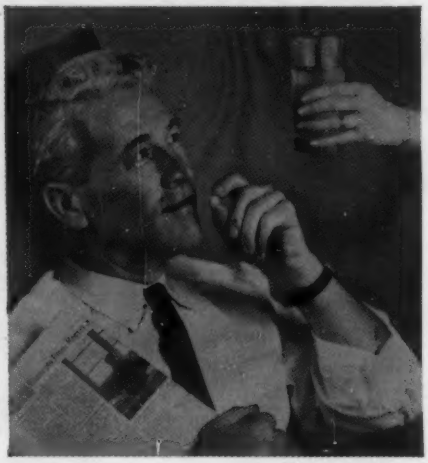
rapid, safe control of infection throughout the urinary system

EATON LABORATORIES, Division of The Norwich Pharmacal Company, NORWICH, N.Y.

all it takes
for sustained protection in asthma



One tablet on arising protects through the working day, virtually eliminates the need for emergency daytime medication.



One tablet 12 hours later lets the patient sleep, reduces the need for middle-of-the-night emergency medication.

New Tedral® SA

Sustained-Action antiasthmatic

■ protects against bronchial constriction ■ reduces mucous congestion ■ increases vital capacity and ability to exhale ■ reduces frequency and severity of asthmatic attacks ■ convenient b.i.d. dosage

Each tablet contains 180 mg. theophylline, 48 mg. ephedrine HCl, and 25 mg. phenobarbital.
For samples and literature on new Tedral SA write to P. O. Box 27, Morris Plains, N. J.

WARNER CHILCOTT
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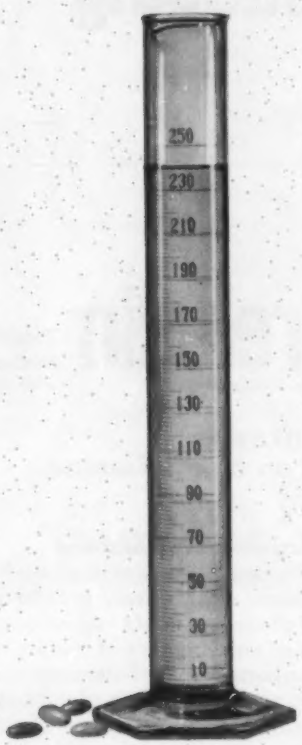
SP15A makers of TEDRAL DELUSIL PROLOID PERITRATE MANDELAMINE

reducing

In acute and chronic diarrhea the most effective symptomatic solution to the dual problem:

dual action Sorboquel® tablets

(polycarbophil-thihexinol methylbromide)





***fast action* 1**

for too fluid feces:

Exceptional water-binding capacity of polycarbophil to absorb free fecal water

***fast action* 2**

for too frequent evacuations:

Superior, yet selective, nonopiate antimotility action of thihexinol methylbromide

(Complete information regarding the use of Sorboquel Tablets is available on request.)

dosage: For older children and adults, initial dosage of one SORBOQUEL Tablet q.i.d. is usually adequate. Severe diarrheas may require six, or even eight, tablets in divided daily doses. (Dosages exceeding six tablets a day should not be employed over prolonged periods.)

Supplied: Sorboquel Tablets, bottles of 50 and 250. Each tablet contains 0.5 Gm. polycarbophil and 15 mg. thihexinol methylbromide.

WHITE LABORATORIES, INC., Kenilworth, New Jersey

reducing the problems of reducing



Preludin®

brand of phenmetrazine HCl

Tablets and Endurets®

prolonged-action tablets

**an oxazine...
not an amphetamine**

Unsurpassed Effectiveness
In all controlled clinical studies, Preludin has produced impressively greater weight loss than placebo tablets regardless of the degree of enforcement of dietary restriction.

Exceptionally High Tolerance
Reports are numerous of successful use of Preludin in cases intolerant of other anorexiants.

Flexibility of Dosage
Available as scored tablets of 25 mg. for b.i.d. or t.i.d. administration and also as Endurets®, 75 mg., for once daily administration.

Precautions and Contraindications
Although there have been no reports of significant toxic reactions to Preludin, on theoretical grounds it should not be given to patients with severe hypertension, thyrotoxicosis or acute coronary disease.
Preludin may be used with caution in cases of moderate hypertension and cardiac decompensation.

Preludin®, brand of phenmetrazine hydrochloride.
Under license from C. H. Boehringer Sohn, Ingelheim.

Geigy Pharmaceuticals
Division of Geigy Chemical Corporation
Ardsley, New York

PR 577-61

Geigy

Gastro-intestinal disorders?

CONSIDER CITRUS PECTIN AND DERIVATIVES: *Pectin N.F., Pectin Cellulose Complex, Polygalacturonic and Galacturonic Acids*

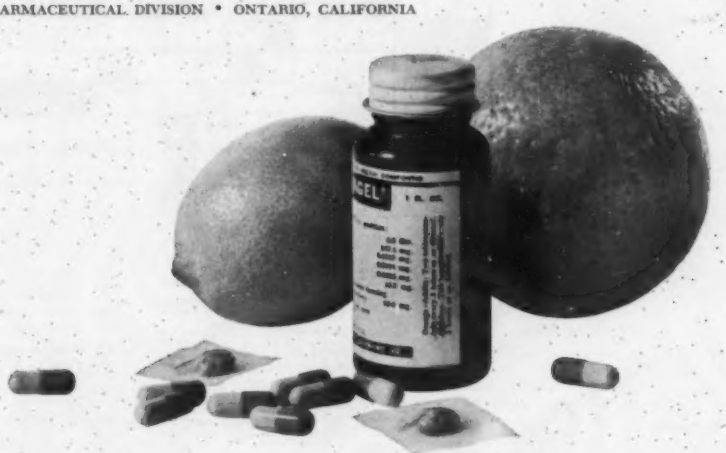
Diarrheas, dysenteries—many other intestinal disorders—respond quickly and favorably to pharmaceutical specialties whose key ingredient is *an adequate dosage* of citrus pectin or a derivative.

Sunkist® Pectin N.F. provides a dependable therapeutic dosage of galacturonic acid—the recognized detoxicating factor. Specialty formulations of leading pharmaceutical manufacturers contain this product of Sunkist Growers.

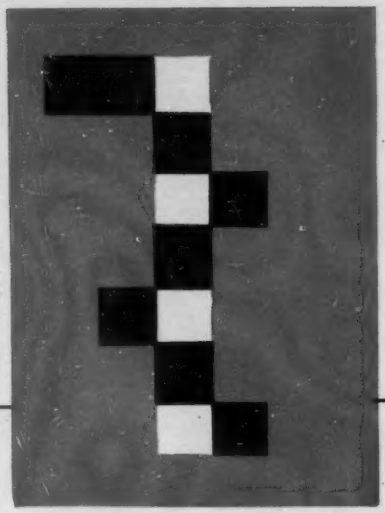
Literature and bibliography is available. Address: Sunkist Growers, Pharmaceutical Products, 720 East Sunkist Street, Ontario, Calif.

Sunkist Growers

PHARMACEUTICAL DIVISION • ONTARIO, CALIFORNIA

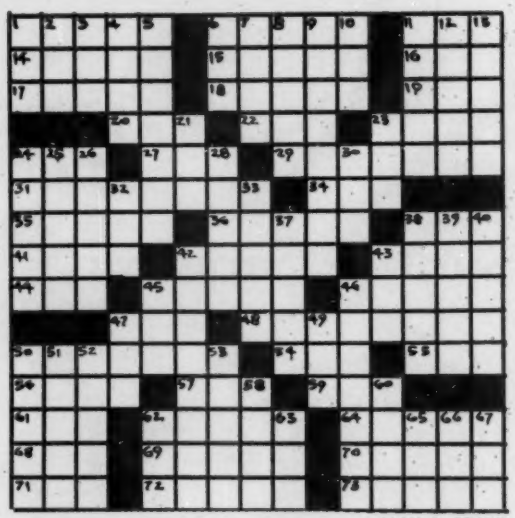


PR 977-61



Medical Teasers

A challenging crossword puzzle for the physician
(Solution on page 175a)



ALAN A. BROWN

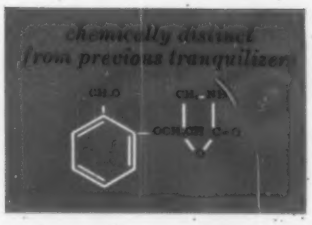
ACROSS

1. Pertaining to the unborn
6. Weird
11. Withdraw fluid from a cavity
14. Nimble
15. Stuffs
16. Tumor (suffix)
17. Sexual gland
18. Soot
19. Fastener
20. Female sexual cell
22. Sulfur, lutecium (symbols)
23. Sound of mind
24. Prefix meaning wrong
27. Snakelike fish
29. Naps
31. Not injured
34. Climbing shrub
35. The great omentum (pl.)
36. Tropical skin disease
38. Anodal closing contraction (abbr.)
41. _____- Pappenheim stain
42. Putrefaction
43. Former Secretary of State
44. To cause to sit
45. Graduated glass tube used in chemistry
46. Eagle's nest
47. A bursa
48. Scales formed on the scalp
50. Examine by feeling
54. To stretch out
55. "Let a mixture be made" (L., abbr.)
56. A melody
57. Latvian coin
58. An explosive
61. A sheltered place
62. A pulpy fruit
64. Any part of the body having a special function
68. Homo sapiens
69. Bone (comb. form)
70. Cereal grains
71. Specific soluble substance (abbr.)
72. Grayish color
73. A fruit

DOWN

1. Work hard
2. The self
3. A metallic element
4. Winglike structures
5. Account books
6. Electrocardiogram (abbr.)
7. Transgresses
8. Reproaches
9. Protection against disease
10. Chemical suffix
11. Semiprecious stone
12. Substance derived from ammonia
13. Sections of a window
21. A precious stone
23. Kind of bean
24. Viscid secretion
25. Trifling
26. Change direction
28. Person with Hansen's disease
30. Female reproductive cells
32. Axilla
33. Cut into cubes
37. Pertaining to birth
38. Gold
39. Precipice
40. A fissure
42. Having no tubular structure
43. Not him
45. Barium, argon (symbols)
46. Tumor with a glandlike structure
47. Health resort
49. Egg of a louse
50. Surface of the hand (pl.)
51. Regions
52. Legal claims
53. An element, in old chemistry
58. Woody plant
60. Treponema (abbr.)
62. Large snake
63. Thither
65. An opening
66. Entirely
67. Nitrogen, selenium (symbols)

LEDERLE INTRODUCES A NEW TRANQUILIZER



TREPIDONE®

Mephenoxalone Lederle

A NEW DEVELOPMENT
IN EMOTIONAL THERAPY
FROM LEDERLE

TRE

HELPS THE
PATIENT
"BE HIMSELF"
AGAIN...CALM,
YET FULLY
RESPONSIVE..
USUALLY
FREE OF
DROWSINESS
OR EUPHORIA



PIDONE®

Mephenoxalone Lederle

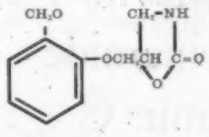
TO RESTORE THE NORMAL PATTERN OF EMOTIONAL RESPONSE

TREPIDONE Mephenoxalone is a new tranquilizer which has shown the capacity to relieve mild to moderate anxiety and tension without detracting significantly from mental alertness. Treated patients have shown little tendency to become sleepy or detached from reality, or to experience euphoria as a result of the drug. They generally respond normally to everyday situations . . . require fewer restrictions on activities, and tend to complain less frequently.

Extensive trials have shown no habit-forming properties or adverse effects on withdrawal, even after long-term administration. Complete information on indications, dosage, precautions and contraindications is available from your Lederle representative, or write to Medical Advisory Department.

Average adult dosage: One 400 mg. tablet, four times daily. Supplied: Half-scored tablets 400 mg. TREPIDONE Mephenoxalone, bottle of 50.

chemically distinct from previous tranquilizers



LEDERLE LABORATORIES
A Division of AMERICAN CYANAMID COMPANY
Pearl River, New York

Theragran®

SQUIBB VITAMINS FOR THERAPY

For your patients with infections or other illnesses who need therapeutic vitamin support. Each Theragran supplies the essential vitamins in truly therapeutic amounts:

Vitamin A	25,000 U.S.P. Units
Vitamin D	1,000 U.S.P. Units
Thiamine Mononitrate	10 mg.
Riboflavin	10 mg.
Niacinamide	100 mg.
Vitamin C	200 mg.
Pyridoxine Hydrochloride	5 mg.
Calcium Pantothenate	20 mg.
Vitamin B_{12}	5 mcg.

SQUIBB *Squibb Quality—the Priceless Ingredient*

"Theragran"® is a Squibb trademark

"nutrition...present as a modifying or complicating factor in nearly every illness or disease state"[1]

1. Youmans, J. B.: Am. J. Med. 25:659 (Nov.) 1958

cardiac diseases "Who can say, for example, whether the patient chronically ill with myocardial failure may not have a poorer myocardium because of a moderate deficiency in the vitamin B-complex? Something is known of the relationship of vitamin C to the intercellular ground substance and repair of tissues. One may speculate upon the effects of a deficiency of this vitamin, short of scurvy, upon the tissues in chronic disease."[2] 2. Kampmeier, R. H.: Am. J. Med. 25:662 (Nov.) 1958.

arthritis "It is our practice to prescribe a multiple vitamin preparation to patients with rheumatoid arthritis simply to insure nutritional adequacy . . ."[3]
3. Fernandez-Herlihy, L.: Lahey Clinic Bull. 11:12 (July-Sept.) 1958.

digestive diseases Symptoms attributable to B-vitamin deficiency are commonly observed in patients on peptic ulcer diets.[4] Daily administration of therapeutic vitamins to patients with hepatitis and cirrhosis is recommended by the National Research Council.[5] 4. Sebrell, W. H.: Am. J. Med. 25:673 (Nov.) 1958. 5. Pollack, H., and Halpern, S. L.: Therapeutic Nutrition. National Academy of Sciences and National Research Council, Washington, D. C., 1952, p. 57.

degenerative diseases "Studies by Wexberg, Jolliffe and others have indicated that many of the symptoms attributed in the past to senility or to cerebral arteriosclerosis seem to respond with remarkable speed to the administration of vitamins, particularly niacin and ascorbic acid. These facts indicate that the vitamin reserve of aging persons is lowered, even to the danger point, more than is the case in the average American adult."[6] 6. Overholser, W., and Fong, T.C.C. in Stieglitz, E. J.: Geriatric Medicine, 3rd edition, J. B. Lippincott, Philadelphia, 1954, p. 264.

infectious diseases Infections cause a lowering of ascorbic acid levels in the plasma; and the absorption of this vitamin is reduced in diarrheal states.[7] 7. Goldsmith, G. A.: Conference on Vitamin C. The New York Academy of Sciences, New York City, Oct. 7 and 8, 1960. Reported in: Medical Science 8:772 (Dec.10) 1960.

diabetes Diabetics, like all patients on restricted diets, require an extra source of vitamins.[8] "Rigidly limiting the bread intake of the diabetic patient automatically eliminates a large amount of thiamin from the diet. . . . There is some evidence of interference with normal riboflavin utilization during catabolic episodes."[9]
8. Duncan, G. G.: Diseases of Metabolism 4th edition W. B. Saunders, Philadelphia, 1959, p. 812. 9. Pollack, H.: Am. J. Med. 25:708 (Nov.) 1958.

FOR FULL INFORMATION SEE YOUR SQUIBB PRODUCT REFERENCE OR PRODUCT BRIEF.

✓ from depression to the right frame of mind



✓ continuous, 24-hour cerebral oxygenation for the aging patient. By stimulating respiratory and circulatory function, GERONIAZOL TT* relieves mental confusion, depression, anxiety, and emotional instability—frequent problems in patients after forty—due to presenile changes in the vasculature of the brain. Notable benefit usually is seen within one to three weeks of therapy. It improves appetite, sleep pattern, and outlook—and GERONIAZOL TT* is non-hypertensive, non-excitatory.

Neither a tranquilizer nor a psychic energizer, GERONIAZOL TT* provides a physiologic stimulation of the cerebrum to permit the patient to adjust to his surroundings, become part of life itself again—and *attain the right frame of mind.*

References: 1. Curran, T. R., and Phelps, D. K.: Am. Pract. & Dig. Treat. *11:* 617, 1960. 2. Levy, S.: J.A.M.A. *153:* 1260, 1953. 3. Connolly, R.: W. Va. Med. J. *56:* 263, 1960.



Each TEMPOTROL contains: Pentylenetetrazol, 300 mg.; and Nicotinic Acid, 150 mg.

Indications: Respiratory and circulatory stimulant for the aged and debilitated with symptoms of mental confusion, depression, anxiety or arteriosclerotic psychosis.

Contraindications: None known in recommended dosage.

Dosage: One GERONIAZOL TT* tablet, b. i. d.

Supplied: Bottles of 42 tablets (3 weeks' treatment).

GERONIAZOL® TT*

*TEMPOTROL® (Time Controlled Therapy)

COLUMBUS PHARMACAL COMPANY affiliate of PHILIPS ROXANE, INC.
Columbus 16, Ohio



Letters to the Editor

A Solution

The Kennedy proposal for medical care of the aged reminds me of the French Revolution. During that revolution, when the peasants cried for bread, Marie Antoinette said "Let them eat cake." In 1961 when the "peasants," those over 65, cry for bread, care in the home, office, and hospital, the government offers them cake, and poor cake at that, in the form of indemnity hospitalization, diagnostic clinic services, and nursing home care.

The government claims that it is against socialized medicine, that the patient has free choice of a physician. However, this is a myth. The majority of those over 65 can't pay the $10 a day charge for the first nine days of hospitalization and then also pay for a physician's services. The result is that they will become ward patients with no choice of physician. The majority of the illnesses which bring a patient to a doctor like colds, backaches, etc. are not covered. For any diagnostic study, done only in a clinic, the patient will pay the first $20. The government will pay the rest. There is not a choice of physician again.

Any practicing physician knows that a vast majority of older folks are reluctant to go into hospitals even in the face of major illnesses. They prefer their own home, if possible, and their own physician. The Kennedy proposal for old age care obviously fails in this respect. Any care for the aged plan, to meet the needs of this group, must have the following:

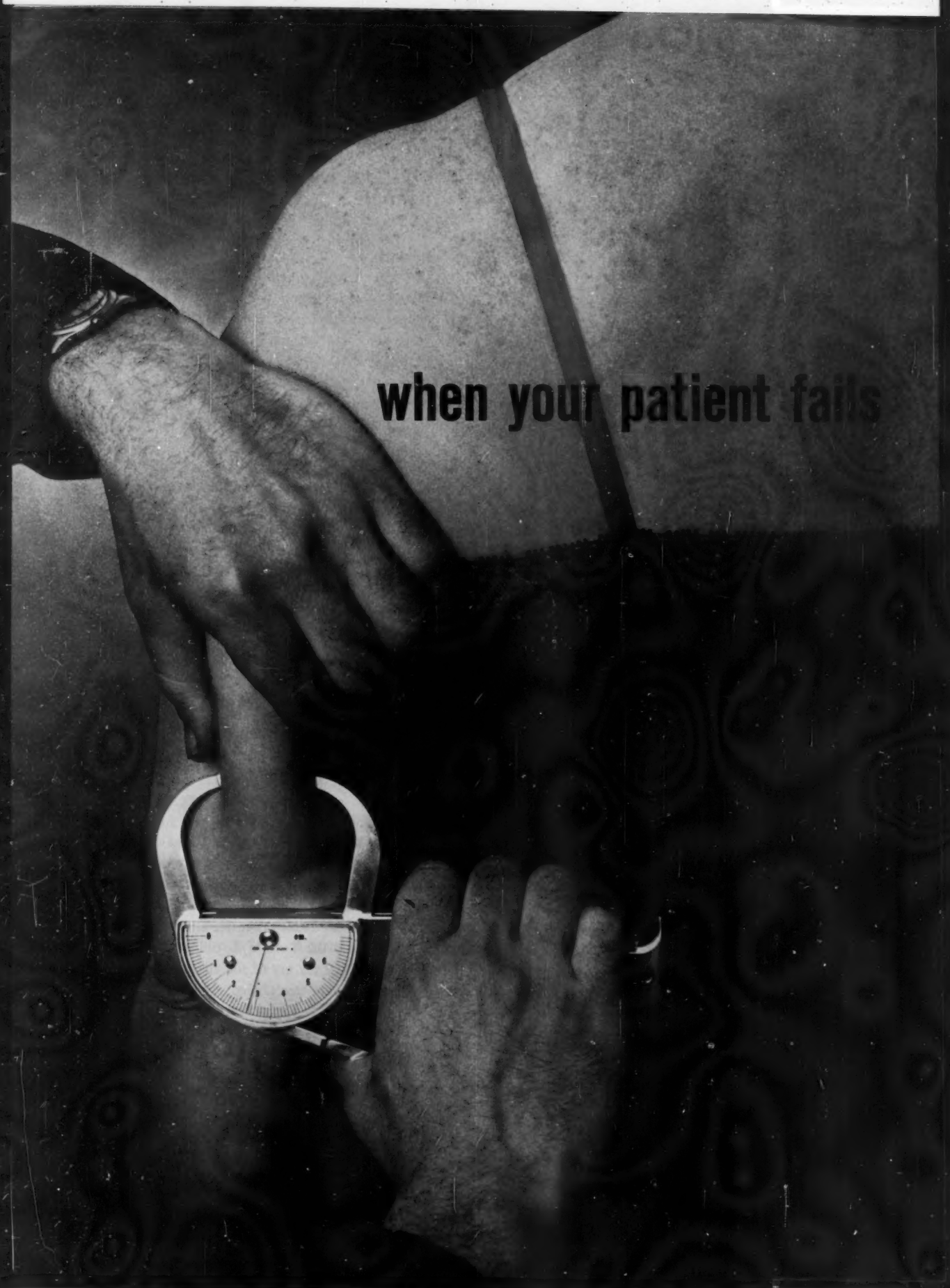
- visits to the doctor's office and home visits by the doctor
- laboratory and radiology studies in the doctor's office
- full cost hospitalization where needed for private medical and surgical physician's care
- nursing home care as a continuation of hospital care

Any of the standard "shield plans" can cover the above. I proposed a solution to this problem (MEDICAL TIMES, June-July, and Dec. 1960) which uses social security as a means of forced saving to pay for the plan. The AMA is opposed to the social security approach for fear that bureaucratic organization will be set up which at first will control medical care for the aged and then put out its tentacles to control medical care of everyone.

I disagree with their reasoning. My plan has met with favor by patients, doctors, etc. Its only fault is that it is so simple. However, another question that is raised about it is: How does it care for people who are not on social security? The following solution is offered.

A Federal Deposit Health Insurance Fund should be set up. This could be a part of the social security administration or a separate agency. Under the Kerr-Mills bill, the government allots states a certain amount of money for care of the aged, the indigent, and those who cannot completely afford private medical care. The states match this money according to a formula evolved by the government. Why not take this money and place it in the Federal Deposit Health Insurance Fund? It can draw interest or be invested as the government sees fit and so increase in amount. (Under the Kerr-Mills bill, a means test is necessary before the money can be used for health care for the aged.) The money from this fund can be used to buy the best available private medical insurance for those who are indigent and those not on social security. For those on social security, but who do not have enough money in social security to pay completely for private medical services, the fund will make up the difference. It is thus obvious that one can utilize social security and the Kerr-Mills bill to solve the problem without the cry of socialized medicine, and still provide free choice of physician. This I feel will satisfy the doctors, the social planners, government, etc., and will be far cheaper than the Kennedy proposal.

MAXWELL SPRING, M.D., F.A.C.P.
800 Grand Concourse
New York 51, N. Y.


when your patient fails

If fatness is the problem, the skinfold test will tell...

Studies emphasize that persons of "normal" body weight exhibit differences in their fatness and that body weight is an imperfect guide to body fat.[3,4,5] Recently, the calibrated measurement of skinfolds has received increasing clinical attention as a method of measuring obesity – because of its simplicity, rapidity and accuracy.[1,2]

Measurement is made at selected sites with special constant tension calipers.[3]

Detailed information on the skinfold test is given in a special booklet, available to physicians on request.

the skinfold test

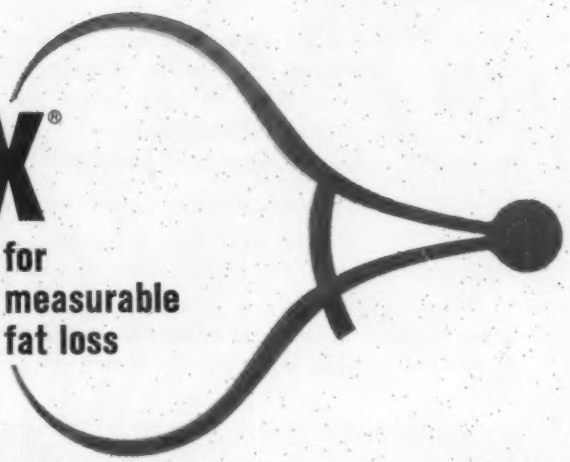
NEW BAMADEX®

Dextro-amphetamine sulfate with meprobamate

SEQUELS®

Sustained Release Capsules

for measurable fat loss



NEW BAMADEX SEQUELS *contain the appetite-suppressant, d-amphetamine, effectively balanced with the tranquilizer, meprobamate, for sustained, effective appetite control without overstimulation of the central nervous system. One* BAMADEX SEQUELS *capsule suppresses appetite up to 8 hours... carries the patient through the critical period of compulsive eating... helps establish a new pattern of eating less – the ultimate aim of therapy.*

Each capsule contains: d-amphetamine sulfate, 15 mg.; meprobamate, 300 mg. **Dosage:** One capsule one-half hour before breakfast. **Supply:** Bottles of 30. **Precautions:** Use with caution in patients hypersensitive to sympathomimetic compounds, who have coronary or cardiovascular disease, or who are severely hypertensive.

REQUEST COMPLETE INFORMATION ON INDICATIONS, DOSAGE, PRECAUTIONS AND CONTRAINDICATIONS FROM YOUR LEDERLE REPRESENTATIVE OR WRITE TO MEDICAL ADVISORY DEPARTMENT.

References: 1. Best, W.R.: J. Lab. & Clin. Med. 43:967 (1954). 2. Brožek, J. and Keys, A.: Nutrition Abstr. & Rev. 20:247 (1950). 3. Garn, S.M. and Shamir, Z.: In Methods for Research in Human Growth. Charles C. Thomas, Springfield, Ill., 1958, p. 64. 4. Mayer, J.: Postgrad. Med. 25:469 (1959). 5. Tanner, J.M.: Proc. Nutrition Soc. 18:148 (1959).

(Lange Skinfold Caliper courtesy of Kentucky Research Foundation, Wenner-Gren Aeronautical Research Laboratory, University of Kentucky, Lexington, Kentucky)

Lederle **LEDERLE LABORATORIES, A Division of American Cyanamid Company, Pearl River, New York**



SUCCESSFUL FAMILY PLANNING...BASED ON YOUR COUNSEL AND **LANESTA® GEL**

The new baby is beautiful, but his arrival raises some problems in family planning on which the mother will need help — *your* help. What you counsel or suggest to her may determine the family's happiness for many years to come. When she comes in to see you for her routine postnatal check-up, you have an ideal opportunity to counsel her and answer her questions. It's also an ideal time to recommend the use of Lanesta Gel.

Lanesta Gel, with or without a diaphragm, is a most effective means of conception control. Lanesta Gel offers faster spermicidal action because it rapidly diffuses into the seminal clot. In fact, the mean diffusion spermicidal time of Lanesta Gel is three to seven times faster than the mean diffusion times of ten leading commercially available contraceptive creams, gels, or jellies, according to Gamble ("Spermicidal Times of Commercial Contraceptive Materials — 1959").*

Lanesta Gel has complete esthetic acceptance and is well tolerated.

*Gamble, C.J.: Am. Pract. & Digest. Treat. *11*:852 (Oct.) 1960. See also Berberian, D.A., and Slighter, R.G.: J.A.M.A. *168*:2257 (Dec. 27) 1958; Kaufman, S.A.: Obst. and Gynec. *15*:401 (March) 1960; Warner, M.P.: J.Am.M. Women's A. *14*:412 (May) 1959.

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are opiates now outmoded in pediatric diarrhea?



Entoquel™ syrup

(Thihexinol methylbromide)

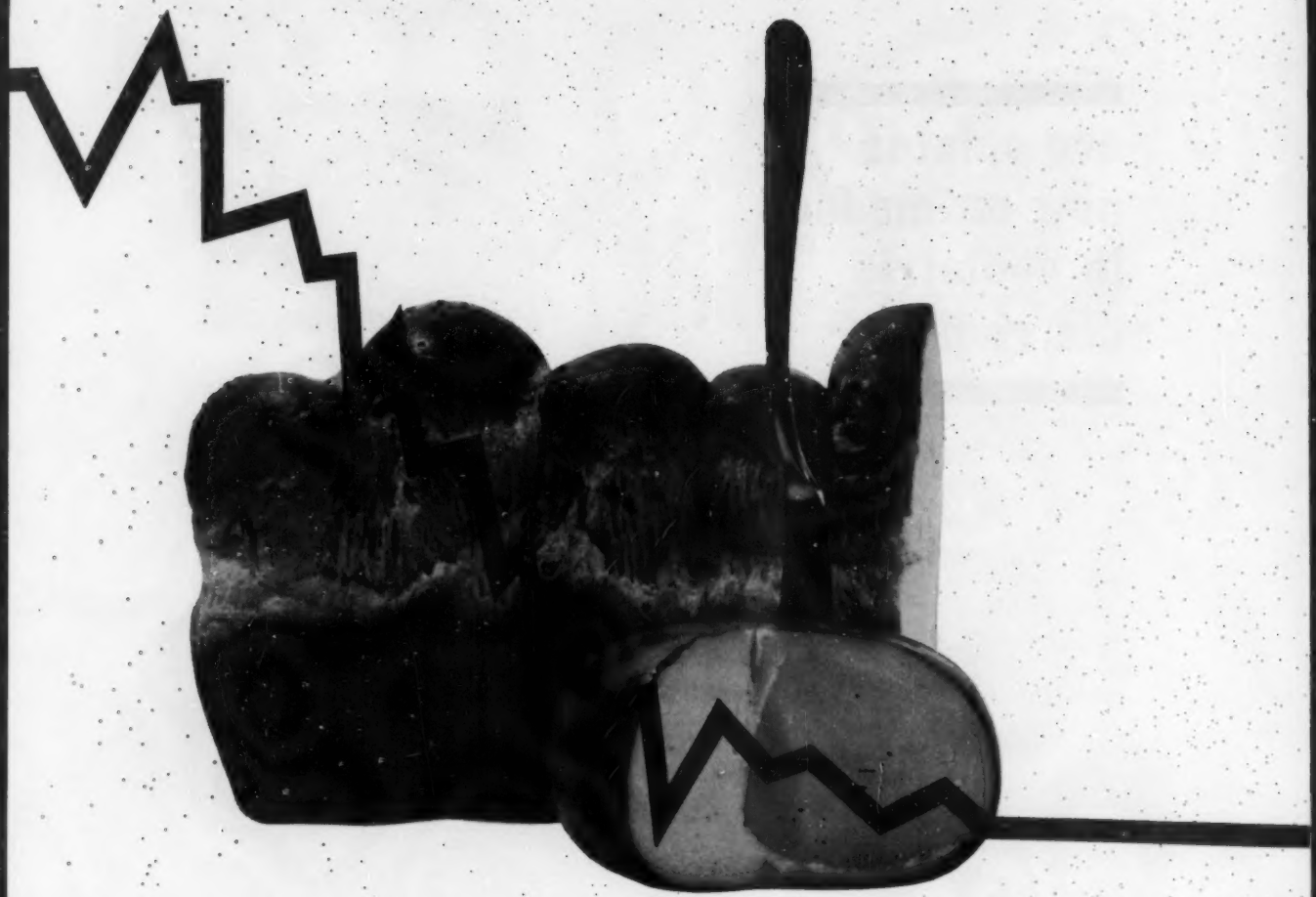
the first pharmacologically-specific, non-narcotic antiperistaltic agent ■ controls diarrhea as rapidly and effectively as opiates ■ without the undesirable properties of opiates ■ pleasant butterscotch flavor

AND WHEN THE DIARRHEA IS BACTERIAL IN ORIGIN

Entoquel with Neomycin syrup

(Complete information regarding the use of Entoquel Syrup and Entoquel with Neomycin Syrup is available on request.)
Supplied: Entoquel Syrup – each 5 cc. contains 5 mg. thihexinol methylbromide, bottles of 6 oz. Entoquel with Neomycin Syrup – each 5 cc. contains 5 mg. thihexinol methylbromide and 50 mg. neomycin (from the sulfate), bottles of 6 oz. Available on Rx only.

WHITE LABORATORIES, INC., Kenilworth, New Jersey



Adding Orinase may improve control significantly in diabetics now imperfectly managed on diet alone.[1-4]

Orinase releases native insulin via physiologic channels, giving the patient direct metabolic support. And Orinase dosage is flexible and readily individualized.

To improve control in many diabetics on dietotherapy — add Orinase. It can make a gratifying clinical difference.

Indications: Orinase is indicated as the therapeutic agent of choice in the majority of selected cases of adult or maturity-onset type of diabetes mellitus. In certain patients with labile diabetes, the use of Orinase as a supplement to insulin therapy may effect stabilization of the diabetic condition and lower insulin requirement.

Dosage:

Patients not receiving insulin — There is no fixed regimen for initiating Orinase therapy, but a suggested method is:

First day — 6 Orinase tablets (3.0 Gm.). **Second day** — 4 Orinase tablets (2.0 Gm.). **Third day** — 2 Orinase tablets (1.0 Gm.). **Fourth and subsequent days** — 2 Orinase tablets (1.0 Gm.) with increase or decrease as necessary to control glycosuria.

There is no fixed maintenance dose of Orinase; therapy may be individualized according to patient response. Adjust the maintenance dose (usually 1 to 4 tablets) to the smallest dose consistent with good control. The daily maintenance dose may be given once daily or in divided doses.

Patients receiving insulin (less than 20 units) — discontinue insulin and institute Orinase; (20 to 40 units) — initiate Orinase with a concurrent 30 to 50% reduction in insulin dose with a further careful reduction as response to Orinase is observed; (more than 40 units) — reduce insulin by 20% and initiate Orinase with a further careful reduction in insulin dosage as response to Orinase is observed.

Cautions: Observe all standard diabetes precautions: dietary restriction, weight control, exercise, hygiene, avoidance of infection, and adherence to dosage. As with exogenous insulin, changes in dosage may be necessary during the course of management. In the event of stress conditions, trauma or infection, increased dosage or supplementary animal insulin may be required.

Contraindications: Orinase as the sole therapeutic agent is contraindicated in juvenile diabetes; unstable or brittle diabetes; and diabetes complicated by ketosis, acidosis or coma.

Side effects: Side effects are mild, transient and limited to approximately 3% of patients. Hypoglycemia and toxic reactions are extremely rare. Hypoglycemia is most likely to occur during the period of transition from insulin to Orinase. Other untoward reactions to Orinase are usually not of a serious nature and consist principally of gastrointestinal disturbances, headache, and variable allergic skin manifestations. The gastrointestinal disturbances (nausea, epigastric fullness, heartburn) and headache appear to be related to the size of the dose, and they frequently disappear when dosage is reduced to maintenance levels or the total daily dose is administered in divided portions after meals. The allergic skin manifestations (pruritus, erythema, and urticarial, morbilliform, or maculopapular eruptions) are transient reactions, which frequently disappear with continued drug administration. However, if the skin reactions persist, Orinase should be discontinued.

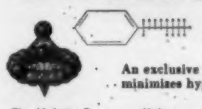
Clinical toxicity: Orinase appears to be remarkably free from gross clinical toxicity on the basis of experience accumulated during more than four years of clinical use. Crystalluria or other untoward effects on renal function have not been observed. Long term studies of hepatic function in humans and experience in over 600,000 diabetics have shown Orinase to be remarkably free of hepatic toxicity. There has been reported only one case of cholestatic jaundice related to Orinase administration, which occurred in a patient with pre-existing liver disease and which rapidly reversed upon discontinuance of the drug.

Each tablet contains:
Tolbutamide ..... 0.5 Gm.
Supplied in bottles of 50.

References:
1. Bollinger, R. E., *et al.*: J. Kansas M. Soc. *61*:135 (March) 1960. 2. Williams, R. H.: Diabetes, New York, Paul B. Hoeber, Inc., 1960, pp. 491, 492. 3. Bradley, R. F.: Ann. New York Acad. Sc. *82*:813 (Sept. 25) 1959. 4. Sherry, S., *et al.*: Ann. New York Acad. Sc. *71*:249 (July 10) 1957.

Orinase*

Upjohn

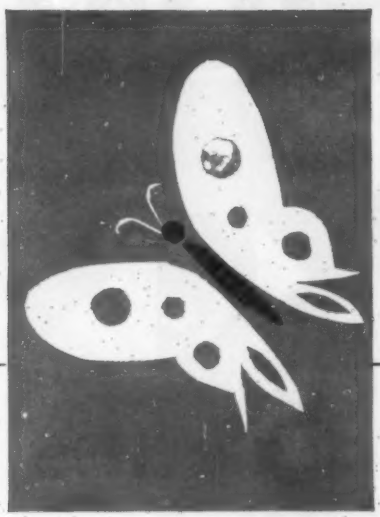


An exclusive methyl "governor" . . minimizes hypoglycemia.

The Upjohn Company, Kalamazoo, Michigan

*Trademark, Reg. U. S. Pat. Off. — tolbutamide, Upjohn

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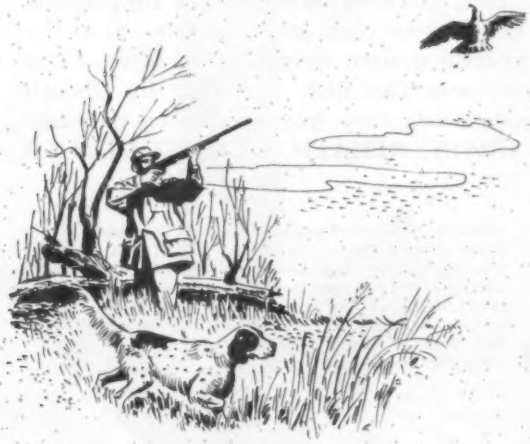


AFTER HOURS

No man is really happy or safe without a hobby, and it makes precious little difference what the outside interest may be—botany, beetles or butterflies, roses, tulips or irises; fishing, mountaineering or antiquities—anything will do so long as he straddles a hobby and rides it hard.—Sir William Osler

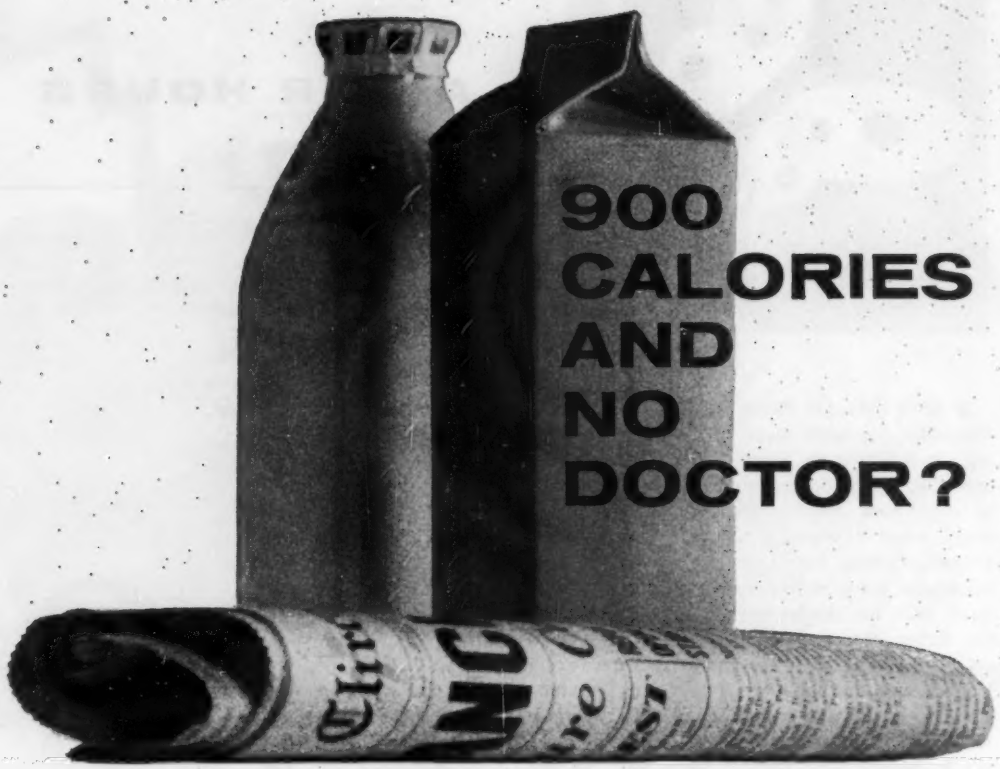
● Since 1941, Dr. Herold K. Bailey of Ashland, Kentucky, has spent much of his spare time fishing. In addition to being a fine sport, fishing, according to the doctor, gives you an opportunity to drop your responsibilities and a chance to enjoy some wholesome fellowship with fishing friends. Fishing has a special appeal for him because of the great variety of techniques that the sport calls for. Vacations are vitally important, Dr. Bailey observes. "Solo physicians have more difficulty getting away for one or two weeks, but I have found that there are always other solo men who are anxious to swap coverage. I think it is vitally important to get out of town and, if possible, not to divulge your identity when away so that people you meet don't start in asking for advice and telling you their pet medical problem.

● Dr. I. A. Nickerson of Granville, Ohio, has been an avid hunter for the past 25 years. One of hunting's chief appeals, says the doctor, is that it permits you to get out "in new country . . . completely out of contact with people. This I find refreshing." The doctor observes that he cannot get entirely away from his practice so long as he remains in town. "Hunting takes me not only out of town but away from people who have a desire to discuss medicine when they 'corner' a doctor."





● Gordon R. Ley, M.D., is a golfer of 12 years' standing. In recent years the Port Clinton, Ohio, physician has won his home course championship and a President's Cup in a handicap tournament. Golf has a special appeal for the doctor because "you forget all your medical problems while playing. To play good golf you must concentrate on your game. You forget everything except propelling the little white ball around the course in the least number of strokes for three and a half to four hours; at the same time, you keep physically fit." The golf course is an excellent place to get away from your practice, says Dr. Ley, and he gives these reasons: "I relax because I can be reached for emergencies and OB cases. But routine things can wait until my game is finished. Most of my patients know where I spend every Thursday afternoon in the summer and make an honest effort to not interfere with my golf day. I think they know by now that I feel better and can do better work with a little rest (from work) and relaxation on the golf course."

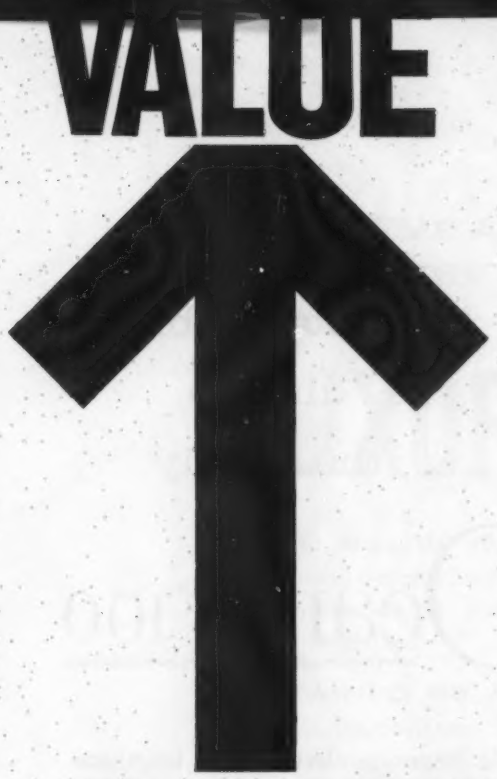


LET'S CONSIDER . . . *A 900 calorie daily diet that supplies no bulk is frequently not enough* to even dent the appetite and "bulk hunger" demands of many overweight patients. Neither is a self-administered diet plan a suitable substitute for a *medically-supervised* weight reduction program. Such fad-inspired regimens overlook the fundamental physiologic problems of obesity. Obocell helps the obese patient adhere to *your* diet chart by curbing gnawing appetite *and* suppressing bulk hunger during and between meals. Under your care, and with Obocell as the basic control factor, patients can arrive at their desired weight on schedule. Time and again, this combination of a *physician-prescribed* diet reinforced by Obocell therapy has proved to be the safest, most satisfactory way to shorten patients' beltlines while lengthening their lifelines. **IRWIN, NEISLER & CO.** DECATUR, ILL.

***only* through your prescription**

OBOCELL®

OBOCELL®, brand of anorexic, Neisler. **Formula:** Dextro-Amphetamine Phosphate, 5 mg.; Nicel (Irwin, Neisler's brand of high-viscosity Methylcellulose), 160 mg. **Action:** Obocell controls the appetite by acting on the central nervous system, and controls bulk hunger by supplying non-nutritive bulk to create a sense of fullness and satisfaction. **Dosage:** 3 to 6 tablets daily with a full glass of water, preferably one hour before meals.



TOPICAL STEROID NEWS: BREAKTHROUGH IN THERAPY

In steroid responsive dermatoses you may prescribe new Panzalone Cream for rapid healing without concern about side effects and cost-to-patient, even when used on extensive areas for prolonged periods.

2% CREAM

PANZALONE T.M.

delta-5-hemisuccinoxypregnenolone*, DOAK



BREAKTHROUGH IN THERAPY

because the 2% concentration of Panzalone Cream helps assure quick relief of symptoms and more rapid healing of lesions,

because Panzalone is a new and fundamentally different steroid for topical application; it is non-corticoid and thus cannot produce corticoid side effects and

because cost-to-patient of an Rx for Panzalone Cream, reflecting the economies in synthesis of this new steroid, will be less than ½ the average for comparable topical steroid creams.

Panzalone Cream is applied 3-4 times a day, supplied as 15 Gram (½ oz.) tubes. Each gram of water washable cream contains 20 mg. of delta-5-hemisuccinoxypregnenolone (Δ^5-pregnen-3(β)-hemisuccinoxy-20-one), DOAK with Buro-Sol®, DOAK (equivalent to 3.38 mg. aluminum acetate), pH 5.5. Distributed in Canada by Trans-Canada Pharmacal Co., Montreal, P. Q.

*PATENT PENDING

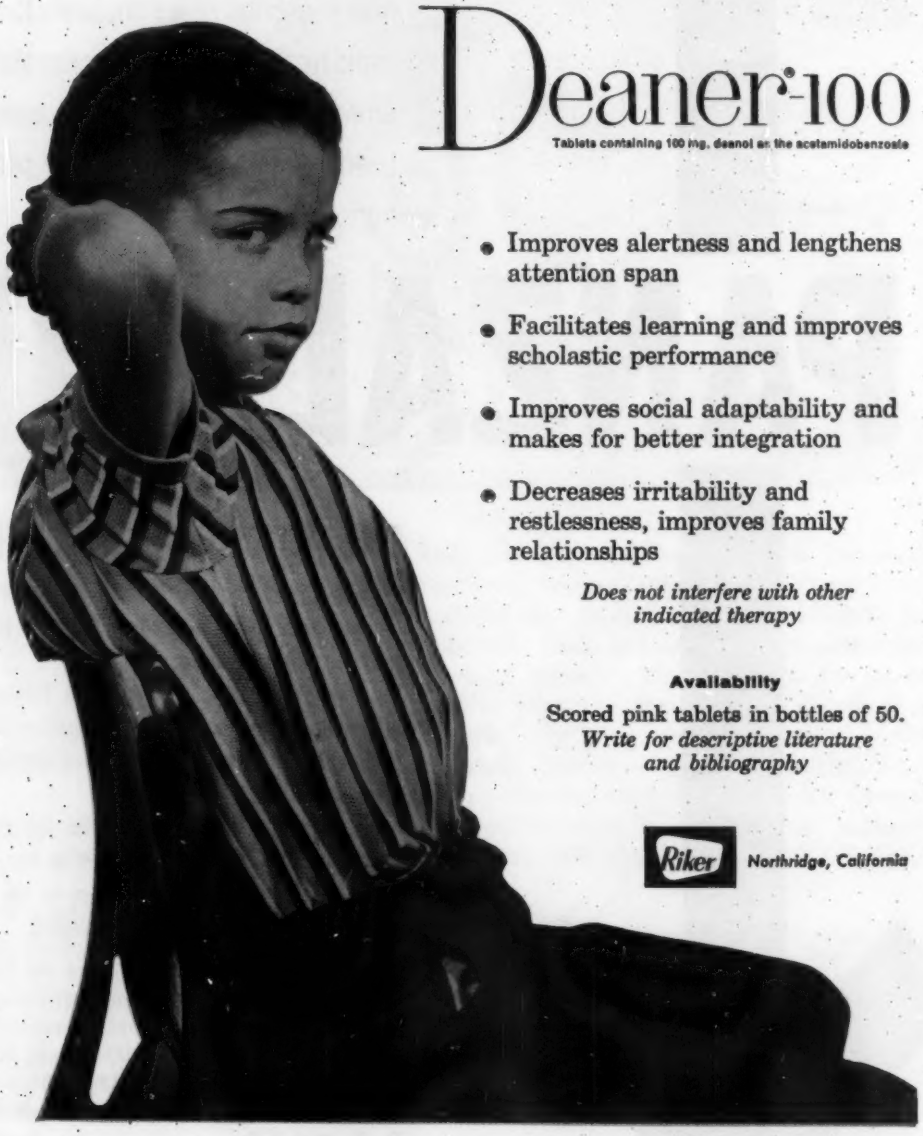
DOAK Pharmacal Co., Inc., New York 16, N.Y.

In the school-age child...

when learning lags behind *and* behavior problems disturb the family

Deaner®-100

Tablets containing 100 mg. deanol as the acetamidobenzoate



- Improves alertness and lengthens attention span
- Facilitates learning and improves scholastic performance
- Improves social adaptability and makes for better integration
- Decreases irritability and restlessness, improves family relationships

Does not interfere with other indicated therapy

Availability

Scored pink tablets in bottles of 50.
Write for descriptive literature and bibliography

Riker Northridge, California

STOPS THE ASTHMA ATTACK IN MINUTES...FOR HOURS... ORALLY

ELIXOPHYLLIN®

RAPID RELIEF IN MINUTES—in 15 minutes[1,2,3] mean theophylline blood levels are comparable to I. V. aminophylline—so that severe attacks have been terminated in 10 to 30 minutes.[1,4,5,6]

SUSTAINED RELIEF FOR HOURS—After absorption theophylline is slowly eliminated during a 9-hour period,[7] making possible t.i.d. 'round-the-clock protection in chronic cases. **Note:** *With Elixophyllin the patient can learn to abort an attack in its incipient stage.*

NO UNNEEDED SIDE EFFECTS—Since Elixophyllin does not need "auxiliaries," it contains no ephedrine—no barbiturate—no iodide—no steroid. *Gastric distress is rarely encountered.*[8,9]

Each tablespoonful (15 cc.) contains theophylline 80 mg. (equivalent to 100 mg. aminophylline) in a hydro-alcoholic vehicle (alcohol 20%).

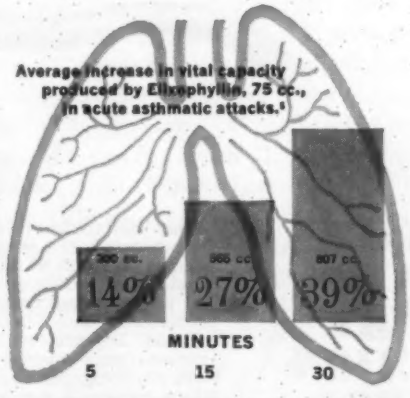
ACUTE ATTACKS:

single dose of 75 cc. for adults; 0.5 cc. per lb. of body weight for children.

24 HOUR CONTROL:

for adults 45 cc. doses before breakfast, at 3 P.M., and before retiring; after two days, 30 cc. doses. Children, first 6 doses 0.3 cc.—then 0.2 cc. per lb. of body weight as above.

Average increase in vital capacity produced by Elixophyllin, 75 cc., in acute asthmatic attacks.[5]

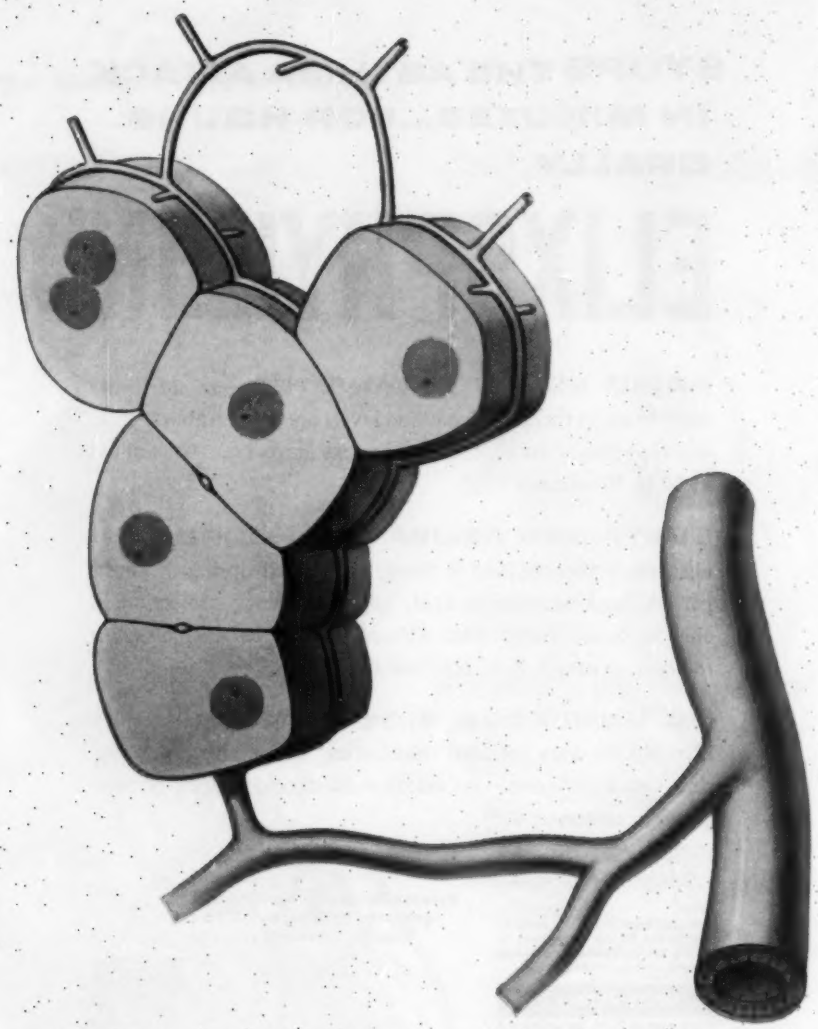


REFERENCES: 1. Kessler, F.: Connecticut M.J. 21:205 (March) 1957. 2. Schlueger, J.; McGinn, J.T., and Hennessy, D.J.: Am. J. Med. Sci. 233:296 (March) 1957. 3. Kessler, F.: Med. Times (Oct.) 1959. 4. Burbank, B.; Schlueger, J., and McGinn, J.: Am. J. Med. Sci. 234:28 (July) 1957. 5. Spielman, A.D.: Ann. Allergy 18:270 (June) 1957. 6. Greenbaum, J.: Ann. Allergy (May-June) 1958. 7. Waxler, S.H., and Shock, J.A.: J.A.M.A. 143:736 (1950). 8. Bickerman, H.A., and Barach, A.L., in Modell, W.: Drugs of Choice 1960-1961, St. Louis, The C.V. Mosby Company, 1960, p. 516. 9. Wilhelm, R.E., Conn, H.F.: In Current Therapy—1961, Philadelphia, W.B. Saunders Company, p. 417.

Patent Pending

Reprints on request

Sherman Laboratories
Detroit 11, Michigan



IMPROVE HEPATO-BILIARY FUNCTION AT THE CELLULAR LEVEL WITH CHOLAN-HMB®

Cholan-HMB contains chemically pure oxidized bile acid to stimulate the production of a large volume of thin bile, flush the biliary tree, improve digestion of fats, and relieve the symptoms of dyspepsia, constipation and indigestion caused by intrahepatic biliary stasis.

To counteract spasm of the biliary sphincters and relax the gallbladder, Cholan-HMB contains spasmolytic homatropine methylbromide. The mild sedative component helps to calm the tense, emotional patient with hepatobiliary dysfunction. Cholan-HMB provides physiologic and symptomatic relief of biliary stasis in primary biliary dyskinesia, pre- and postcholecystectomy syndrome, cholangitis, and digestive disturbances of pregnancy.

Cholan-HMB® — dehydrocholic acid, Maltbie, 250 mg.; 2.5 mg. homatropine methylbromide, and 8 mg. phenobarbital. 1 or 2 tablets t.i.d. after meals.

Cholan-V® — dehydrocholic acid, Maltbie, 250 mg., and 5 mg. homatropine methylbromide. 1 or 2 tablets t.i.d. after meals.

Cholan-DH® — dehydrocholic acid, Maltbie, 250 mg. 1 or 2 tablets t.i.d. after meals.

Supplied: Bottles of 100, 500, and 1,000 tablets.
Contraindication: severe hepatitis; complete obstruction of the hepatic or common bile ducts; glaucoma

Maltbie

Maltbie Laboratories Division, Wallace & Tiernan Inc., Belleville 9, New Jersey

PEN-11



Who Is This Doctor?

Identify the famous physician from clues in this brief biography

His career as researcher, teacher, editor, author and bibliophile is one of the most remarkable of our time. When he died, on May 29, 1960, medicine in general and Yale University Medical School in particular, had lost a truly great figure.

He was born in St. Paul, Minnesota, on November 1, 1899. He was a Rhodes Scholar in Oxford from 1921 to 1923 and received his M.D. from Harvard in 1927. He taught at Oxford and earned three advanced degrees and two honorary degrees there. He was Sterling Professor of Physiology at the Yale Medical School from 1930 to 1951 and Sterling Professor of the History of Medicine from 1951 until his death. He was about to be appointed chairman of the University's new Department of the History of Science and Medicine. He had been chairman of the Department of Physiology.

He served on the National Research Council and was a trustee of the Institute for Advanced Study. He was holder of the Gold Medal of the University of Liege, Order of the British Empire, French Legion of Honor and Order of Leopold II. He was a past president of the Association for Research in Nervous and Mental Disease, having served twice, in 1939 and 1947.

He did much research for the government on aviation medicine in World War II and was cited by the government for his aid in building the collection of the Army Medical Library. The catalog of the Yale Medical Library lists hundreds of his writings on subjects ranging alphabetically from Ablation of Area 13 in Primates to Vesalius.

His best known books are *Harvey Cushing* (1946), Physiology of the Nervous System (3rd ed., 1949), The Great Medical Bibliographers (1951) and *Textbook of Physiology* (17th ed., 1955).

He was editor of the *Journal of the History of Medicine* and chiefly instrumental in building up the modern holdings in medical history of the Yale Medical Library. In 1956 a special issue of the *Yale Journal of Biology and Medicine* was devoted to him, and in 1959 he received the George Sarton Medal of the History of Science Society. Can you identify this doctor? *Answer on page 206a.*



inside as well as outside the hospital...
staphylococci usually remain sensitive to

CHLOROMYCETIN®

(chloramphenicol, Parke-Davis)

That the sensitivity patterns of "street" staphylococci differ widely from those of "hospital" staphylococci is a well-established clinical fact.[1-5] Although strains of staphylococci encountered in general practice have remained relatively sensitive to a number of antibiotics,[6] the problem of antibiotic-resistant staphylococci appears to be a threat to all patients in hospitals today. It is encouraging to note, however, "...that a relatively small percentage of strains develop resistance to chloramphenicol, despite the consumption of large amounts of this antibiotic."[7]

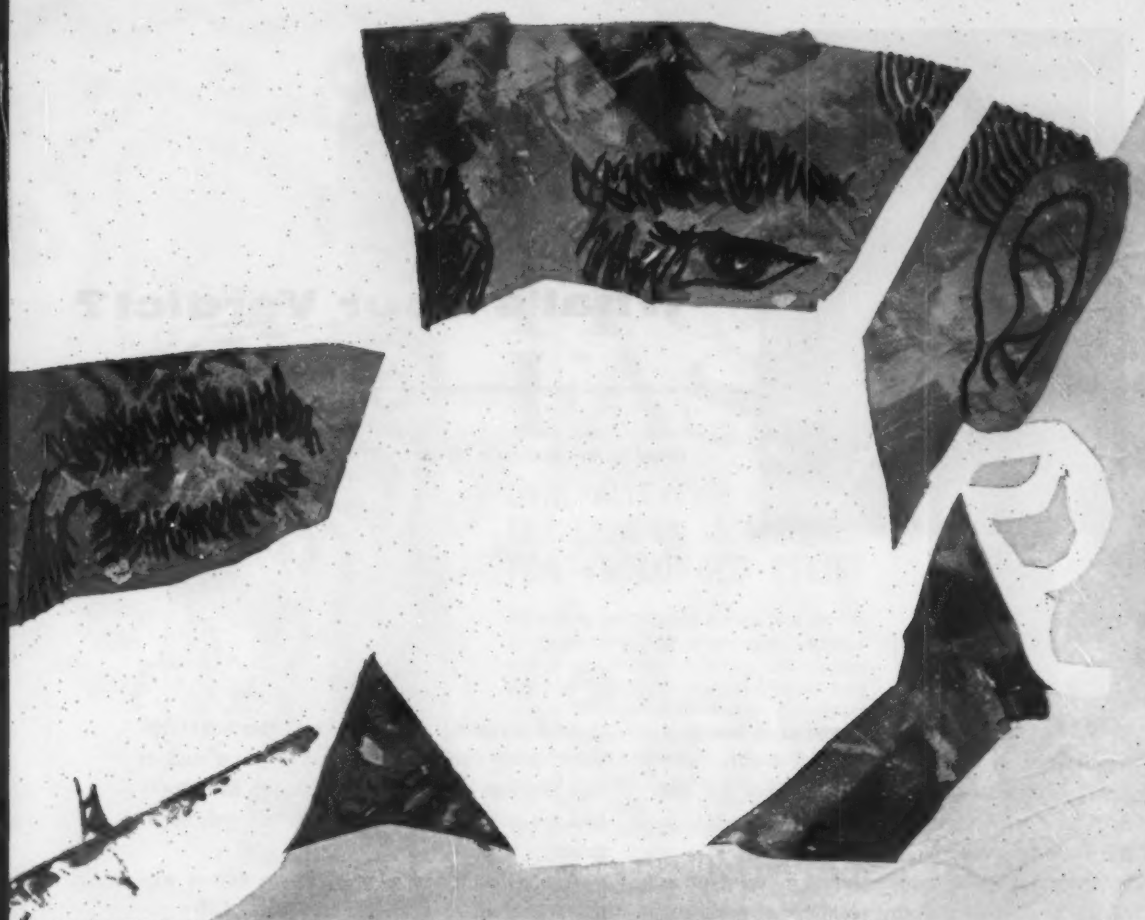
In one hospital, for example, CHLOROMYCETIN "...was the only widely used antibiotic to which few of the strains were resistant."[8] In another hospital, despite steadily increasing use of CHLOROMYCETIN since 1956, "...the percentage of chloramphenicol-resistant strains has actually been lower in subsequent years."[1] Elsewhere, insofar as hospital staphylococci are concerned, it appears that "...the problem of antibiotic resistance can be regarded as minimal for chloramphenicol."[2]

CHLOROMYCETIN (chloramphenicol, Parke-Davis) is available in various forms, including Kapseals® of 250 mg., in bottles of 16 and 100.

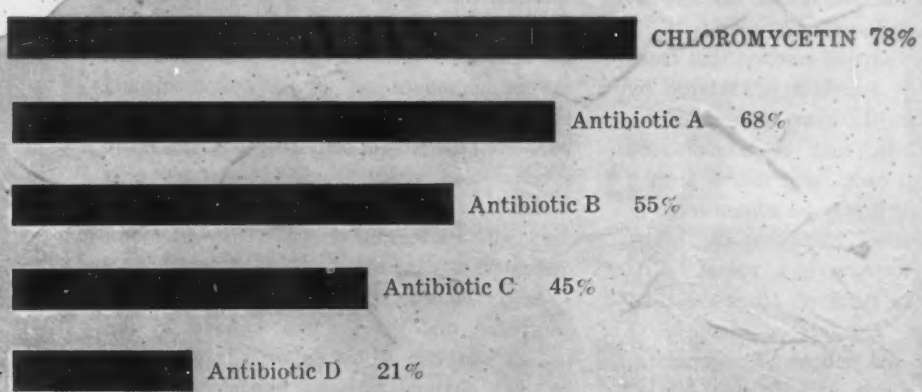
See package insert for details of administration and dosage.

Warning: Serious and even fatal blood dyscrasias (aplastic anemia, hypoplastic anemia, thrombocytopenia, granulocytopenia) are known to occur after the administration of chloramphenicol. Blood dyscrasias have occurred after short-term and with prolonged therapy with this drug. Bearing in mind the possibility that such reactions may occur, chloramphenicol should be used only for serious infections caused by organisms which are susceptible to its antibacterial effects. Chloramphenicol should not be used when other less potentially dangerous agents will be effective, or in the treatment of trivial infections such as colds, influenza, viral infections of the throat, or as a prophylactic agent.

Precautions: It is essential that adequate blood studies be made during treatment with the drug. While blood studies may detect early peripheral blood changes such as leukopenia or granulocytopenia, before they become irreversible, such studies cannot be relied upon to detect bone marrow depression prior to development of aplastic anemia.



IN VITRO SENSITIVITY OF 250 STRAINS OF STAPHYLOCOCCI TO CHLOROMYCETIN AND TO FOUR OTHER ANTIBIOTICS*



These strains of coagulase-positive staphylococci were isolated from hospitalized patients at a large county hospital during the year 1959. Sensitivity tests were done by the disc method.

*Adapted from Bauer, Perry, & Kirby[1]

References: (1) Bauer, A. W.; Perry, D. M., & Kirby, W. M. M.: *J.A.M.A.* **173**:475, 1960. (2) Fisher, M. W.: *Arch. Int. Med.* **105**:413, 1960. (3) Cohen, S.: *Circulation* **20**:96, 1959. (4) Edwards, T. S.: *Am. J. Ophth.* **48**, Part II:19, 1959. (5) Smith, I. M.: Staphylococcal Infections, Chicago, The Year Book Publishers, Inc., 1958, p. 148. (6) Petersdorf, R. G.; Rose, M. C.; Minchew, H. B.; Keene, W. R., & Bennett, I. L., Jr.: *Arch. Int. Med.* **105**:398, 1960. (7) Editorial: *J.A.M.A.* **173**:544, 1960. (8) Finland, M.; Jones, W. F., Jr., & Bennett, I. L., Jr.: *Arch. Int. Med.* **104**:365, 1959.

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PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



What's Your Verdict?

Edited by Ann Ledakowich, Member of the Bar of New Jersey

It is frequently stated in law that a physician is not a warrantor of a cure. His liability rests solely on accountability for his negligent or wrongful acts, as was illustrated in the following case.

A caudal block administered in the course of an hemorrhoidectomy resulted in paralysis to the patient from the waist down, and caused other permanent injuries. The patient instituted a malpractice action against the surgeon to recover compensation for his injuries.

At the trial the surgeon testified that there are two medically accepted procedures by which to anesthetize the lower portion of the back. The anesthetic may be administered either in the sacral canal, and this is termed a "caudal block," or it may be administered in the subarachnoid space containing the spinal cord, and this is referred to as a "spinal." Different strengths and types of drugs are used for each procedure. The surgeon administered a caudal block to the patient. This operates "extra dural;" it is not intended that the injected fluid should enter the subarachnoid space.

It was the patient's contention that the surgeon was negligent in injecting a caudal anesthetic into the subarachnoid space. The mere fact that he suffered arachnoiditis raises a presumption of negligence. The direct introduction of a caudal anesthesia into the subarachnoid space can produce arachnoiditis and is bad medical practice. The patient admittedly had no direct evidence of the alleged negligence.

A physician, subpoenaed as an expert witness, testified that his examination of the patient revealed a high protein and low cell reaction in the spinal fluid. In his opinion, the fact that the protein was increased out of proportion to the cells indicated that the site of the reaction was in the sacral canal and that the inflammation that this generated affected blood vessels which caused a diffusion of protein. Had the patient suffered a reaction in the subarachnoid space, several thousand cells would have been located in the subarachnoid fluid, whereas actually only 67 cells were found therein.

After considerable study the physician concluded that the reaction suffered by the patient was due to an "idiosyncrasy" of the patient's physical makeup, rather than to an injection of the anesthetic into the subarachnoid cavity.

At the close of the patient's case, the trial court dismissed the case for insufficient evidence of negligence. On an appeal taken by the patient, how would you decide?

Answer on page 206a.



ENDS ITCH FAST

ORAL ALLERCUR REACHES THE SKIN IN 10 MINUTES[1] FOR PROLONGED RELIEF

Allercur is the systemic answer to a dermatology problem. This single agent provides fast, prolonged relief of itching, both allergic and nonallergic, with only 2 to 4 tablets daily —without timed-release devices. Drowsiness and other side effects are of low degree. Unlike topical preparations, Allercur frees the patient of messy, inconvenient local application. Many risks of systemic phenothiazine and glucocorticoid therapy are decreased.

Effective: "An excellent or good antipruritic response occurred in 69 patients (79.5%). No toxic reactions occurred and there were virtually no side effects. Particularly notable were the absence of drowsiness and the rapidity with which the remission of itching occurred."[2] Allercur is also effective in the management of conditions such as nasal allergy, including seasonal hay fever.

CAUTION: If drowsiness occurs, patients should avoid activities demanding alertness.

AVERAGE DOSE: 2 to 4 tablets daily in divided doses.

SUPPLIED: Tan, scored tablets, each containing 20 mg. clemizole HCl, in bottles of 100.

REFERENCES: 1. Kimmig, J.: Hautarzt 3:414 (Sept.) 1952. 2. Butler, P.G.: Western Med. 1:16 (Nov.) 1960. Bibliography on request.



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Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

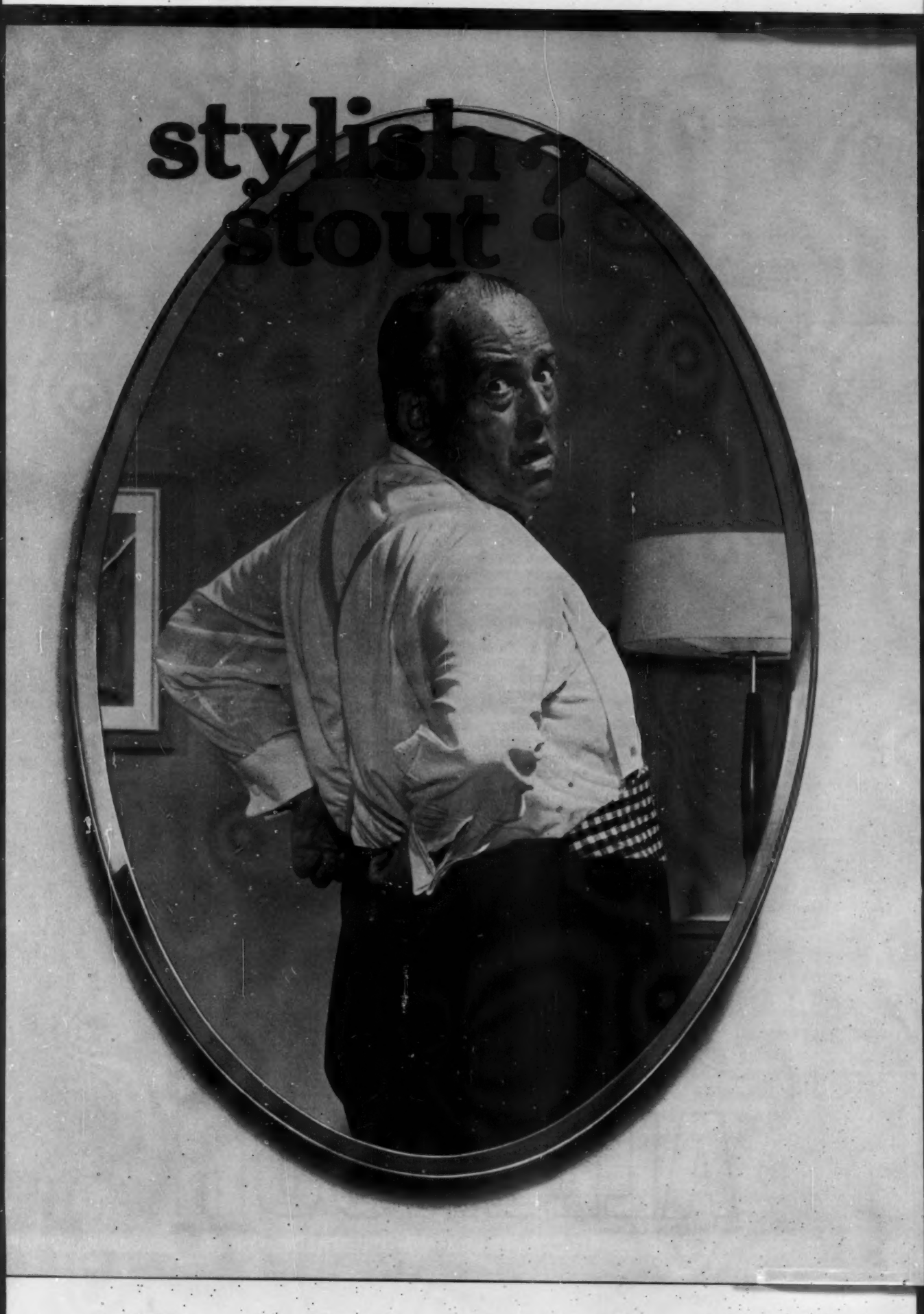


when allergies occur Rx

ALLERCUR

*Reg. T.M., Schering, A. G., Berlin

(clemizole HCl)


stylish?
stout?

UNDER YOUR SUPERVISION

Obedrin®

and the 60-10-70 menu plan can help patients bring weight down and as your judgment dictates... keep weight down!

This logical Obedrin formula helps bring weight down by helping control abnormal food cravings:

- Semoxydrine HCl (Methamphetamine) . . . 5 mg.—proved anorexigenic and mood-lifting effects
- Pentobarbital . . . 20 mg.—guards against excitation
- Ascorbic Acid . . . 100 mg.—aid for mobilization of tissue fluids
- Thiamine Mononitrate . . . 0.5 mg. } effective
- Riboflavin . . . 1 mg. } diet
- Nicotinic Acid (Niacin) . . . 5 mg. } supplementation

The 60-10-70 Menu Plan helps correct unhealthy eating habits without calorie counting—assures balanced food intake.

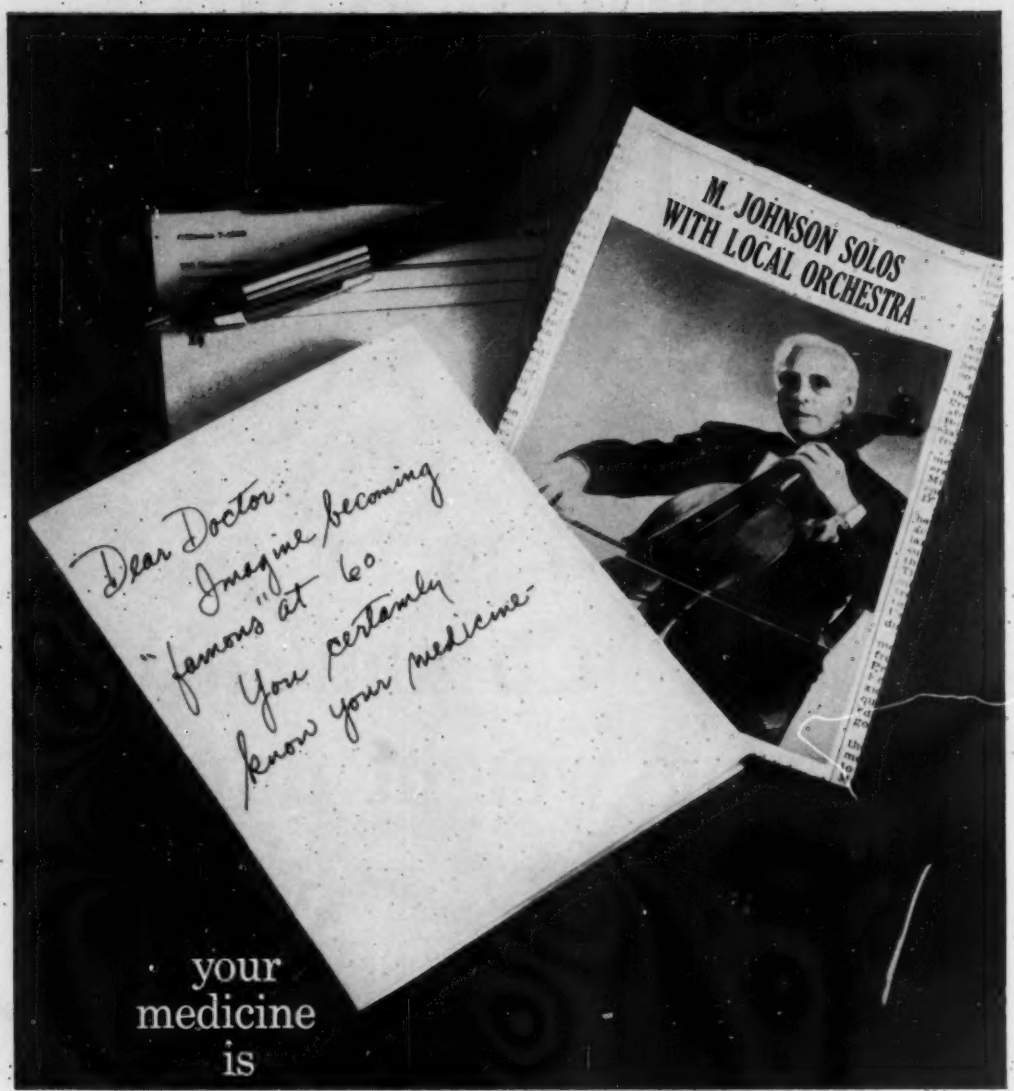
Supplied: Tablets and Capsules—bottles of 100, 500 and 1000.

WRITE FOR 60-10-70 MENU PLANS, WEIGHT CHARTS AND SAMPLES OF OBEDRIN.

THE S. E. MASSENGILL COMPANY

Bristol, Tennessee • New York • Kansas City • San Francisco





GEVRESTIN®

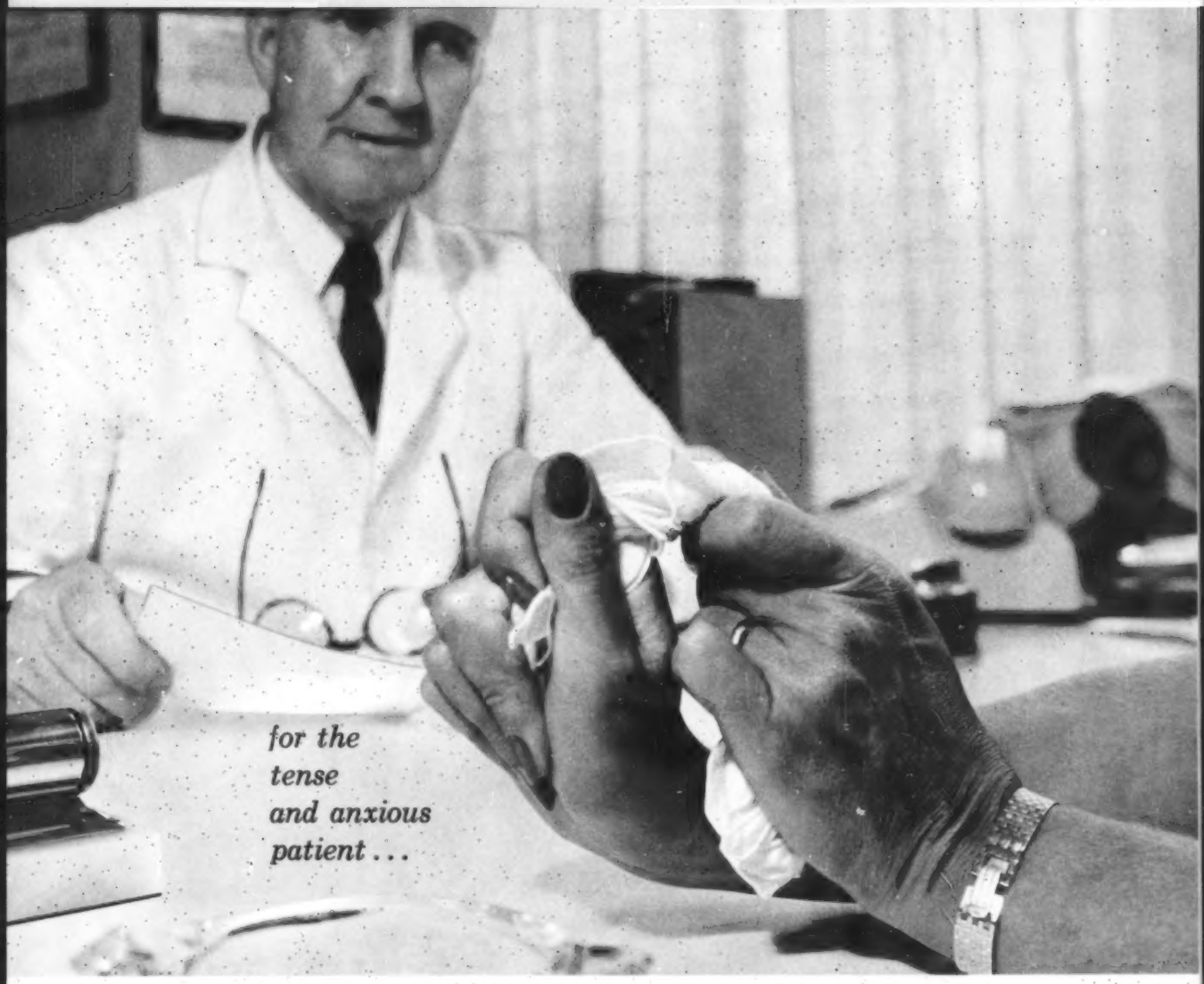
Geriatric Vitamins—Minerals—Hormones—d-Amphetamine Lederle

one capsule every morning supplements the diet to help achieve proper balance: ❖ nutritionally ❖ metabolically ❖ mentally

Each dry-filled capsule contains: Ethinyl Estradiol, 0.01 mg. • Methyl Testosterone, 2.5 mg. • d-Amphetamine Sulfate, 2.5 mg. • Vitamin A (Acetate), 5,000 U.S.P. Units • Vitamin D, 500 U.S.P. Units • Vitamin B_{12} with AUTRINIC® Intrinsic Factor Concentrate, 1/15 N.F. Oral Unit • Thiamine Mononitrate (B_1), 5 mg. • Riboflavin (B_2), 5 mg. • Niacinamide, 15 mg. • Pyridoxine HCl (B_6), 0.5 mg. • Calcium Pantothenate, 5 mg. • Choline Bitartrate, 25 mg. • Inositol, 25 mg. • Ascorbic Acid (C) as Calcium Ascorbate, 50 mg. • l-Lysine Monohydrochloride, 25 mg. • Vitamin E (Tocopheryl Acid Succinate), 10 Int. Units • Rutin, 12.5 mg. • Ferrous Fumarate (Elemental iron, 10 mg.), 30.4 mg. • Iodine (as KI), 0.1 mg. • Calcium (as $CaHPO_4$), 35 mg. • Phosphorus (as $CaHPO_4$), 27 mg. • Fluorine (as CaF_2), 0.1 mg. • Copper (as CuO), 1 mg. • Potassium (as K_2SO_4), 5 mg. • Manganese (as MnO_2), 1 mg. • Zinc (as ZnO), 0.5 mg. • Magnesium (MgO), 1 mg. *Supply:* Bottles of 100 and 1,000.

REQUEST COMPLETE INFORMATION ON INDICATIONS, DOSAGE, PRECAUTIONS AND CONTRAINDICATIONS FROM YOUR LEDERLE REPRESENTATIVE OR WRITE TO MEDICAL ADVISORY DEPARTMENT.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



a sustained-release tranquilizer that does not cause autonomic side reactions

- **WELL TOLERATED, CONTINUOUS RELIEF** of anxiety and tension for 12 hours with just one capsule – without causing autonomic side reactions and with little or no impairment of mental acuity, motor control or normal behavior.
- **ECONOMICAL** for the patient – daily cost is only a dime or so more than for barbiturates.

Meprospan®-400

400 mg. meprobamate (Miltown®) sustained-release capsules

Usual dosage: One capsule at breakfast lasts all day; one capsule with evening meal lasts all night.

Available: *Meprospan-400*, each blue-topped capsule contains 400 mg. Miltown (meprobamate).
Meprospan-200, each yellow-topped capsule contains 200 mg. Miltown (meprobamate). Both potencies in bottles of 30.

WALLACE LABORATORIES / *Cranbury, N. J.*

CME-4100

In over six years



...for the tense and nervous patient

Miltown is a ***known*** drug and a dependable friend. Its few side effects have been fully reported. ***There are no surprises in store for either the patient or the physician.*** This is why, despite the appearance of "new and different" tranquilizers, meprobamate (Miltown) is prescribed more often than any other tranquilizer in the world.

CM-4649

WALLACE LABORATORIES / *Cranbury, N. J.*

of clinical use...

Proven
in more than 750 published clinical studies

Effective
for relief of anxiety and tension

Outstandingly Safe

1. simple dosage schedule relieves anxiety dependably — without the unknown dangers of "new and different" drugs
2. does not produce ataxia, stimulate the appetite or alter sexual function
3. no cumulative effects in long-term therapy
4. does not produce depression, Parkinson-like symptoms, jaundice or agranulocytosis
5. does not muddle the mind or affect normal behavior

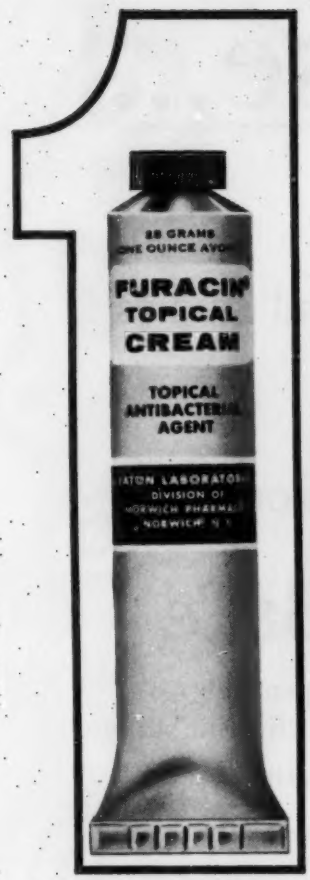
Miltown®
meprobamate (Wallace)

Usual dosage: One or two 400 mg. tablets t.i.d.

Supplied: 400 mg. scored tablets, 200 mg. sugar-coated tablets; bottles of 50. Also as MEPROTABS* — 400 mg. *unmarked*, coated tablets; and in *sustained-release* capsules as MEPROSPAN®-400 and MEPROSPAN®-200 (containing respectively 400 mg. and 200 mg. meprobamate).

*TRADE-MARK

CM-4650



1 OZ.

NOW... A COSMETICALLY SUPERIOR CREAM CONTAINING THE MOST WIDELY PRESCRIBED SINGLE TOPICAL ANTIBACTERIAL

FURACIN® TOPICAL CREAM

brand of nitrofurazone

IN A CONVENIENT 1 OZ. Rx SIZE ▪ For treatment of topical infections such as: impetigo, pustular acne, furunculosis, ecthyma, infected cutaneous ulcers, abrasions, lacerations ▪ For prevention and treatment of infections associated with irradiation or surgical removal of external malignant growths ▪ Particularly suitable for postoperative anal, rectal or pilonidal cyst wounds

broad bactericidal range includes certain stubborn staphylococcal strains ▪ has not induced significant bacterial resistance ▪ nontoxic and nonirritating ▪ does not retard epithelization ▪ low sensitization rate ▪ stable and long-acting, even in exudates

FURACIN ▪ Topical Cream, 1 oz. (28 Gm.) tube ▪ Soluble Dressing, 1 oz. (28 Gm.) tube ▪ Furacin-HC Cream (with hydrocortisone), 5 and 20 Gm. tubes ▪ and other special formulations for every topical need

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Quadrinal*

a rapid way to clear the airway

- **stops wheezing**
- **increases cough effectiveness**
- **relieves spasm**

In chronic disorders associated with obstructed respiration, the dependable antispasmodic and expectorant action of Quadrinal rapidly clears the bronchial tree. Patients breathe more easily and acute episodes of bronchospasm are often eliminated. Quadrinal is well tolerated, even on prolonged administration. The potassium iodide in Quadrinal provides an expectorant of time-tested effectiveness and safety.

Indications: Bronchial asthma, chronic bronchitis, pulmonary fibrosis, pulmonary emphysema.

Quadrinal Tablets, containing ephedrine HCl (24 mg.), phenobarbital (24 mg.), "Phyllicin"* (theophylline-calcium salicylate) (130 mg.), and potassium iodide (0.3 Gm.).

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a new Quadrinal dosage form with taste-appeal for all age groups:
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*Quadrinal, Phyllicin®



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the depressed
office
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NIAMID®

BRAND OF NIALAMIDE

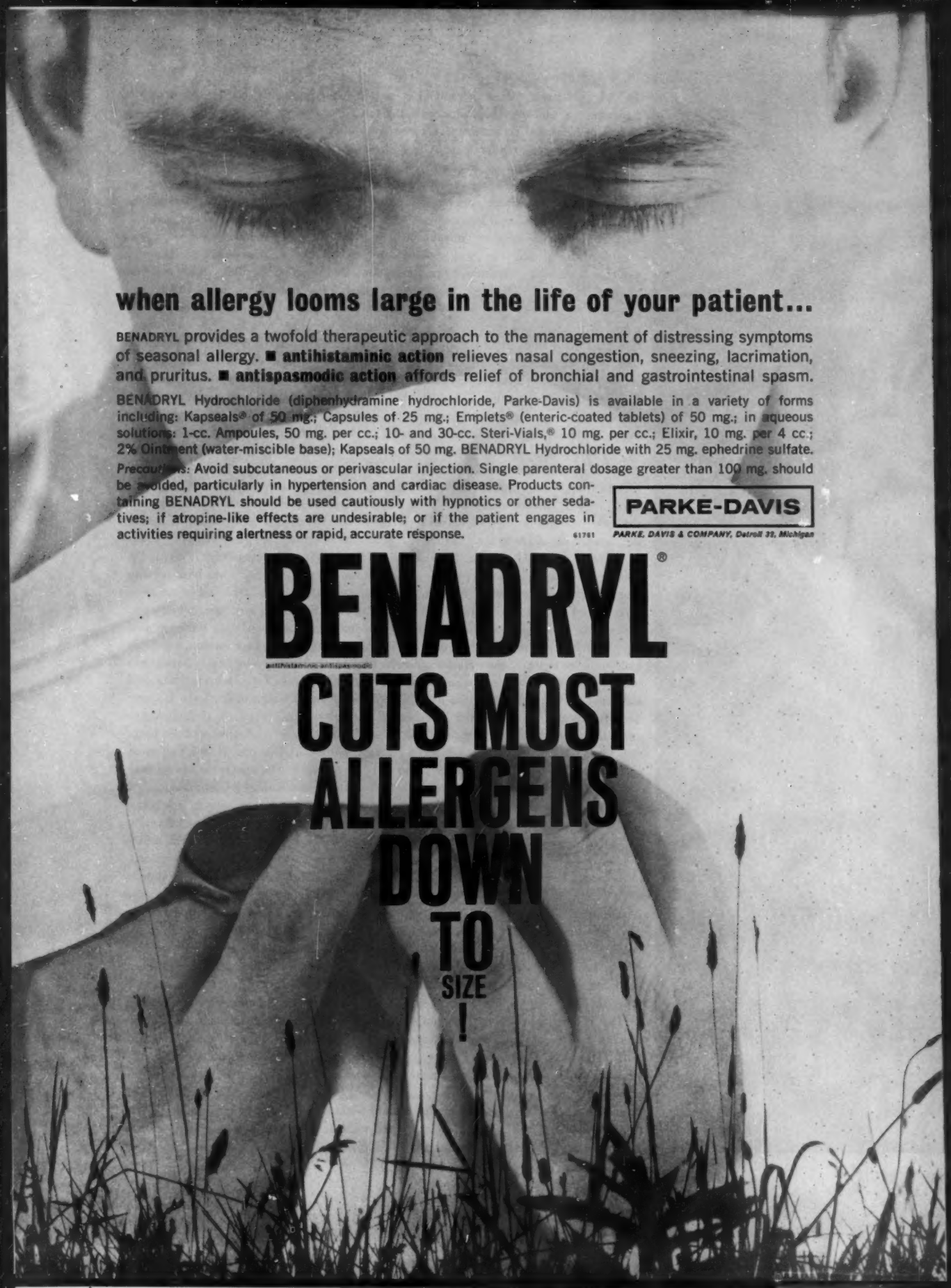
provides remission of depression—smoothly, gradually, without "jarring" □ notably low incidence of serious complications or side effects □ convenience of once-a-day dosage

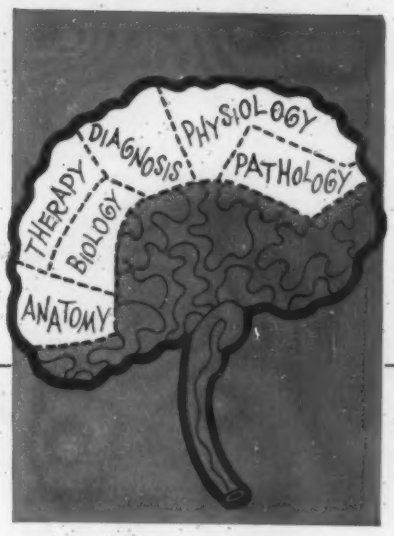
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restores
the will
to
improve

In Brief Niamid, brand of nialamide, is 1-(2-[benzylcarbamyl] ethyl)-2-isonicotinyl-hydrazine, a well-tolerated antidepressant that may correct or relieve depression on once-a-day dosage. **Indications:** Depressive syndromes of varying degrees of severity may be responsive to Niamid including: involutional melancholia, postpartum depression, depressed phase of manic-depressive reaction, senile depression, reactive depression, schizophrenic reaction with depressive component, psychoneurotic depression. ■ In neurotic or psychotic patients, Niamid may normalize or favorably modify aberrant or excessive reactions and symptoms of depression such as: phobias, guilt feelings, dejection, feeling of inadequacy, discouragement, worry, uneasiness, distrustfulness, hypochondriacal and nihilistic ideas, difficulty in concentration, insomnia, loss of energy or drive, indecision, hopelessness, helplessness, decreased functional activity, emotional and physical fatigue, irritableness, inability to rest or relax, sadness, anorexia and weight loss, and withdrawal from society. *In the withdrawn patient,* Niamid may elevate the mood so that there is increased activity, increased awareness and interest in surroundings, and increased participation in group activities. Appetite may be increased and there may be decreased fatigability. Lack of clinical response to other antidepressant therapy does not preclude a favorable response to Niamid. Relief of depression may also be evidenced by elimination or reduction of the need for somatic therapy, such as electroshock. *In patients suffering from depression associated with chronic illness,* Niamid may improve mental outlook, reduce the impact of pain, decrease the amounts of narcotics or analgesics needed, and improve appetite and well-being. *In patients with angina pectoris,* Niamid has been found to be a useful adjunct to management through reduction in frequency of attacks and pain. **Dosage:** Starting dosage is 75 to 100 mg. on a once-a-day or divided daily basis. This may subsequently be adjusted depending upon the tolerance and response. Responses to Niamid are not usually rapid, and revisions of dose should be withheld until at least a few days have elapsed at each level. Increments or decrements of 12½-25 mg. are generally sufficient. A daily dosage of 200 mg. is the maximum recommended for routine use. (As much as 450 mg. daily has been used in some patients.) **Side Effects:** Niamid, in clinical use, has been characterized by a significant lack of toxicity. It is generally well tolerated. Nervousness, restlessness, insomnia, hypomania, or mania, sometimes occur. Occasional headache, weakness, lethargy, vertigo, dryness of the mouth, blurred vision, increased perspiration, constipation, mild skin rash, mild leukopenia, and epigastric distress may be obviated or modified by reductions in dose. Effects due to monoamine oxidase inhibition persist for a substantial period following discontinuation of the drug. **Precautions and Contraindications:** Hepatic toxicity has not been reported in extensive clinical studies. However, if previous or concurrent liver disease is suspected, the possibility of hepatic reactions and liver function studies should be considered. ■ The suicidal patient is always in danger, and great care must be exercised to maintain all security precautions. The apathetic patient may obtain sufficient energy to harm himself before his depression has been fully alleviated. ■ Niamid may potentiate sedatives, narcotics, hypnotics, analgesics, muscle relaxants, sympathomimetic agents, thiazide compounds and stimulants, including alcohol. Caution should be exercised when rauwolfia compounds and Niamid are administered simultaneously. Rare instances have been reported of reactions (including atropine-like effects, and muscular rigidity) occurring when imipramine was administered during or shortly after treatment with certain other drugs that inhibit monoamine oxidase. **In Cardiology:** The central effects of Niamid may encourage hyperactivity and the patient should be closely observed for any such manifestation. Orthostatic hypotension or hypertensive episodes occur in a few individuals; cardiac patients should be carefully selected and closely supervised. **In Epilepsy:** Although in some patients therapeutic benefits have been achieved with Niamid, in others the disease has been aggravated. Care should be exercised in the concomitant use of imipramine, since such treatment with monoamine oxidase inhibitors has been reported to aggravate the grand mal seizures. **In Tuberculosis:** Existing data do not indicate whether resistance of M. tuberculosis to isoniazid may be induced with Niamid therapy; nevertheless, it should be withheld in the depressed patient with coexisting tuberculosis who may need isoniazid. ■ As with all therapeutic agents excreted in part via the kidney, due caution in adjusting dosage in patients with impaired renal function should be observed. **Supplied:** Niamid (Nialamide) Tablets, 25 mg.: 100's—pink, scored tablets; 100 mg.: 100's—orange, scored tablets./*More detailed professional information available on request.*


when allergy looms large in the life of your patient...
BENADRYL provides a twofold therapeutic approach to the management of distressing symptoms of seasonal allergy. ■ antihistaminic action relieves nasal congestion, sneezing, lacrimation, and pruritus. ■ antispasmodic action affords relief of bronchial and gastrointestinal spasm.
BENADRYL Hydrochloride (diphenhydramine hydrochloride, Parke-Davis) is available in a variety of forms including: Kapseals® of 50 mg.; Capsules of 25 mg.; Emplets® (enteric-coated tablets) of 50 mg.; in aqueous solutions: 1-cc. Ampoules, 50 mg. per cc.; 10- and 30-cc. Steri-Vials,® 10 mg. per cc.; Elixir, 10 mg. per 4 cc.; 2% Ointment (water-miscible base); Kapseals of 50 mg. BENADRYL Hydrochloride with 25 mg. ephedrine sulfate.
Precautions: Avoid subcutaneous or perivascular injection. Single parenteral dosage greater than 100 mg. should be avoided, particularly in hypertension and cardiac disease. Products containing BENADRYL should be used cautiously with hypnotics or other sedatives; if atropine-like effects are undesirable; or if the patient engages in activities requiring alertness or rapid, accurate response.
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antihistaminic-antispasmodic
CUTS MOST ALLERGENS DOWN TO SIZE!



Mediquiz

These questions were prepared especially for Medical Times by the Professional Examination Service, a division of the American Public Health Association. Answers will be found on page 206a.

1. Second or third degree heart block is a *contraindication* to the use of:

A) Isopropylarterenol.
B) Digitalis.
C) Atropine.
D) Quinidine.
E) Ephedrine.

2. The type of congenital heart diseases most commonly encountered in elderly subjects is:

A) Pulmonic stenosis.
B) Patent ductus arteriosus.
C) Tetralogy of Fallot.
D) Atrial septal defect.
E) Ventricular septal defect.

3. The first EKG change in a myocardial infarction is:

A) Prolonged PR interval.
B) Pronounced Q wave.
C) Inverted P wave.
D) Premature ventricular contractions.
E) Elevated ST segment.

4. Blood pressure in the thigh, compared to that in the arm, is normally:

A) 10-20 mm. lower.
B) The same.
C) 5-10 mm. higher.
D) 10-40 mm. higher.
E) 40-60 mm. higher.

5. A virus has been proved to cause:

A) Influenza.
B) Malaria.
C) Granuloma inguinale.
D) Infectious mononucleosis.
E) Q fever.

6. Bacterial infections characterized by leukopenia, rather than leukocytosis, include:

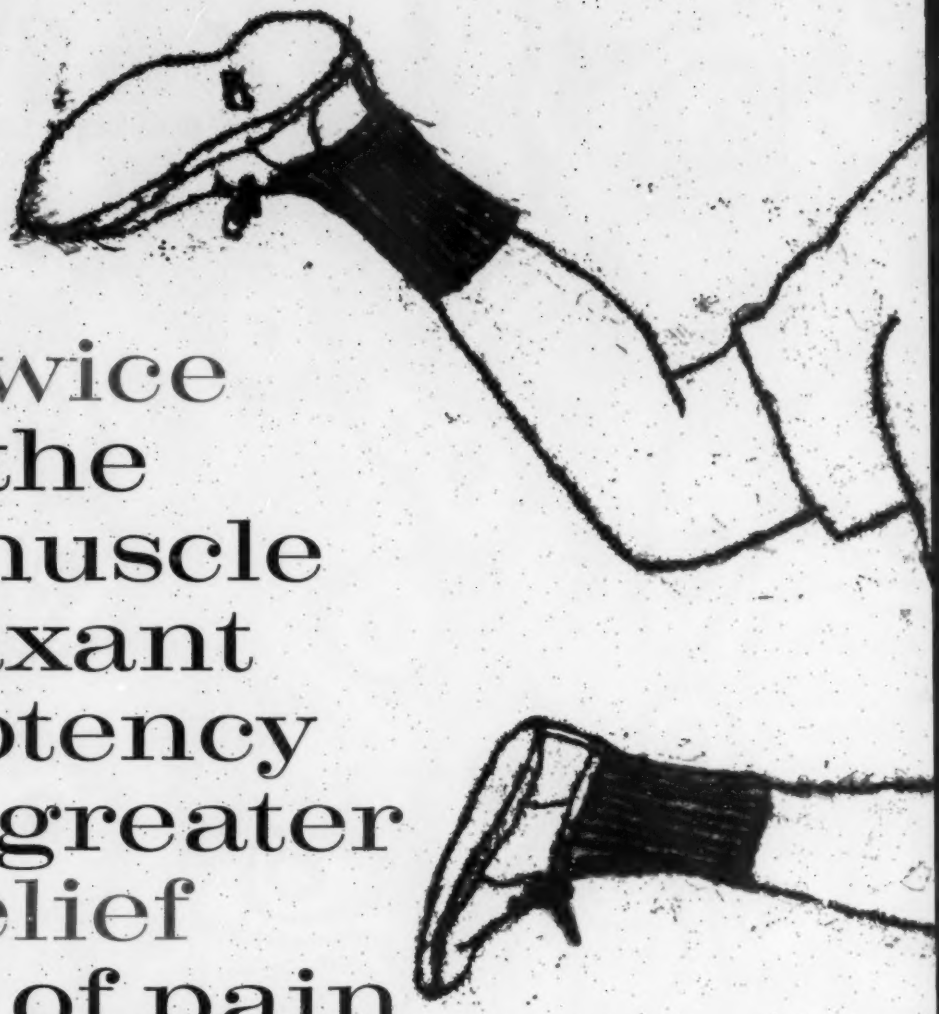
A) Infection with B. Coli and B. Pyocyaneus.
B) Infection with staphylococcus albus and streptococcus viridans.
C) Gonorrhea and meningococcemia.
D) Diphtheria and Friedländer's pneumonia.
E) Brucellosis and typhoid fever.

7. A consistent finding in Laennec's cirrhosis is:

A) Decreased pulse pressure.
B) Increased systemic resistance.
C) Increased cardiac output.
D) Decreased plasma volume.
E) Increased hepatic vein pressure.

8. A 146-pound, 22-year-old salesman is found to have two percent glucose in his urine during a routine preemployment physical examination. He is taking no medication and has had no recent illnesses or weight loss. A two-hour postprandial blood glucose value is

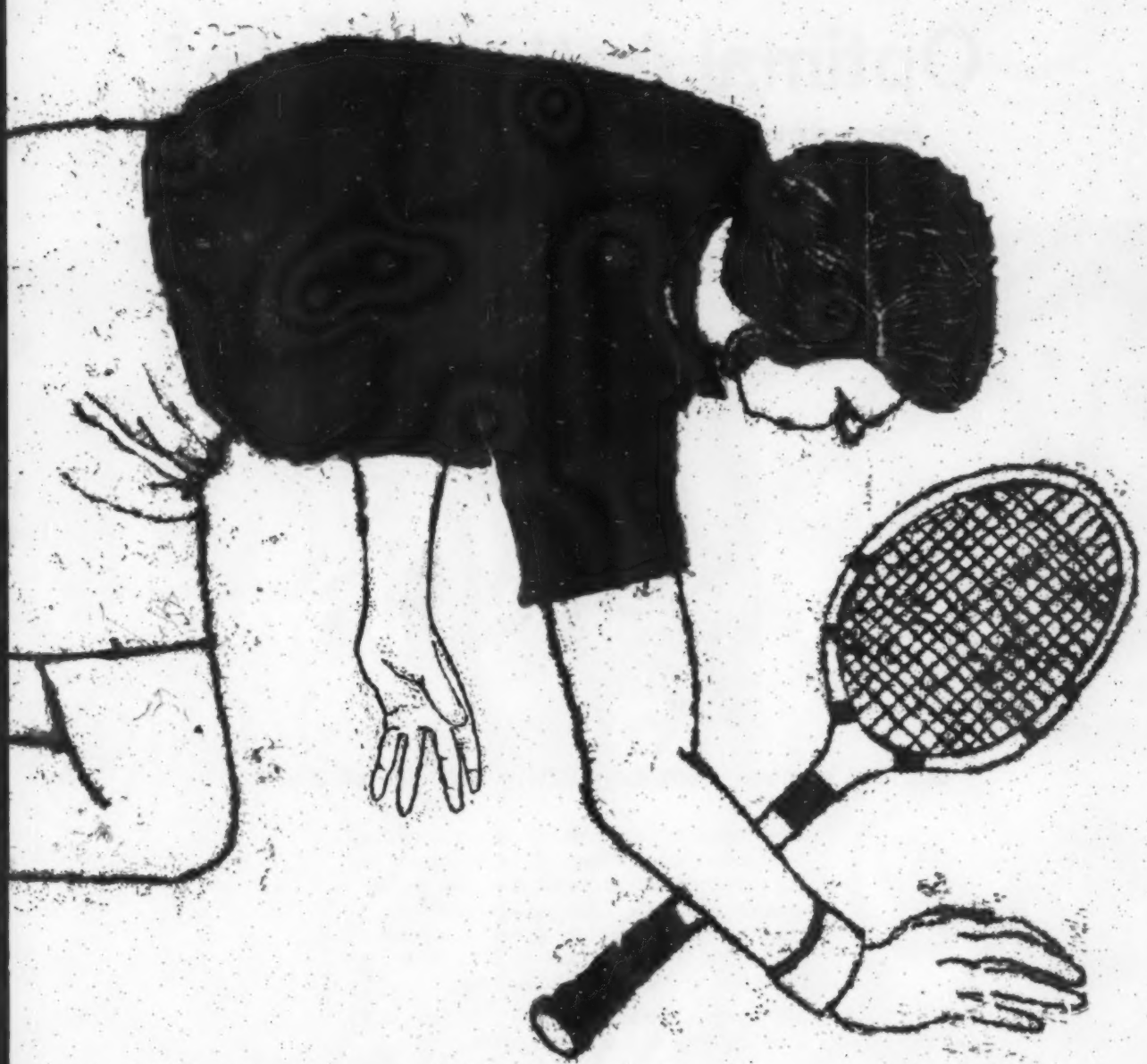
Concluded on page 82a



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Combining a superior skeletal muscle relaxant[1-3] with a preferred musculoskeletal analgesic,[4,5] *new* PARAFON FORTE rapidly relieves *both* stiffness and associated pain of strains or sprains resulting from trauma or too vigorous, unaccustomed exertion. PARAFON FORTE facilitates recovery by improving function. PARAFON FORTE is equally effective in other musculoskeletal disorders, such as myositis, whiplash injuries, low back pain, and fibrositis. Side effects are rare, almost never require discontinuation of therapy.



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References: (1) Settel, E.: Clin. Med. *6*:1373, 1959. (2) Peak, W. P., and Smith, P. T.: Penn. Med. J. *63*:833, 1960. (3) Mayle, F. C.; Sullivan, P. D., and Auth, T. L.: Med. Ann. D. C. *28*:499, 1959. (4) Roth, J. L. A.: Med. Clin. N. Amer. *41*:1517, 1957. (5) Batterman, R. C., and Grossman, A. J.: J. A. M. A. *159*:1619 (Dec. 24) 1955.

†U.S. Patent No. 2,895,877

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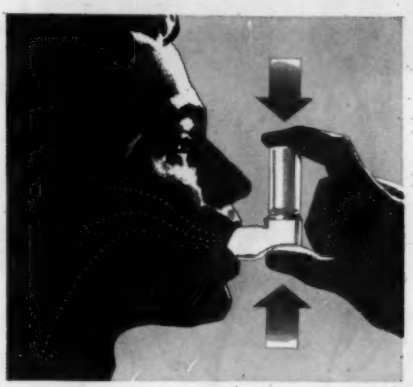
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Restores and maintains skin's normal protective acidity—
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Special water-miscible, evaporable base assures better dispersion,
greater concentration of active ingredients in contact with skin—
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WORLD LEADER IN DERMATOLOGICALS
DOME
CHEMICALS INC.
New York 23, New York

61351

Mediquiz

Concluded from page 77a

reported as 100 mg. percent. The proper management in this case would be:

A) A 1500-calorie, high carbohydrate diet and 5 units of NPH insulin daily.

B) A 1500-calorie, low carbohydrate diet and daily urinalysis.

C) A 2400-calorie regular diet, 15 units daily of NPH insulin, and daily urinalysis.

D) An unrestricted diet with regular insulin coverage based on sugar in urine.

E) An unrestricted diet.

9. Oral temperature below 97° F. is usually associated with all of the following conditions *except:*

A) Diabetic coma.

B) Chronic wasting disease.

C) Cholecystitis.

D) Severe burns.

E) Hypothyroidism.

10. Of the following, the treatment of choice in typhoid fever is:

A) Tetracycline.

B) Streptomycin.

C) Penicillin-streptomycin.

D) A penicillin-hydrocholeretic combination.

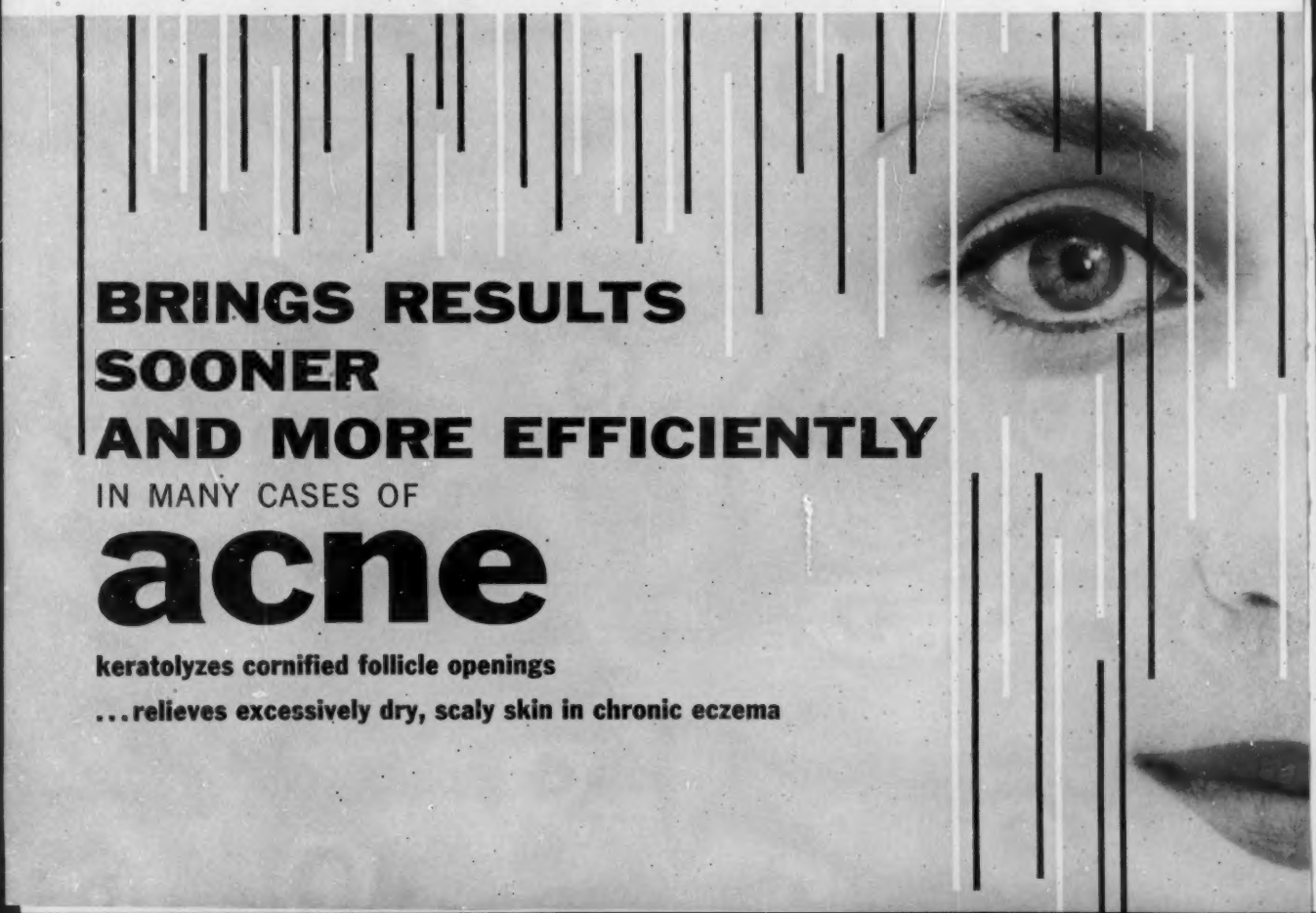
E) Chloramphenicol.

11. Excess thyroid activity causes:

A) Bony overgrowth.

B) Tetany.

C) Osteoporosis.



D) Metastatic calcification.
E) Osteoarthropathy.

12. In treating coma which appears to be due to drug intoxication, the first step should be to:

A) Establish a patent airway.
B) Examine empty bottles to determine drug type.
C) Draw blood for analysis.
D) Inject caffeine.
E) Keep the patient warm.

13. An element essential for hemoglobin formation is:

A) Cadmium.
B) Copper.
C) Magnesium.
D) Beryllium.
E) Calcium.

14. An agent which will produce a diagnostic fall in blood pressure in a patient with pheochromocytoma is:

A) Mecholyl.
B) Histamine phosphate.
C) Resistine.
D) Anectine.
E) Benzodioxane.

15 One of the symptoms of the Stein-Leventhal syndrome is:

A) Retarded mental development.
B) Dwarfism.
C) Amenorrhea.
D) Precocious puberty.
E) Metrorrhea.

(Answers on page 206a)

WANTED: MEDIQUIZ® QUESTIONS

Want to try your hand at preparing questions for MEDICAL TIMES *Mediquiz? If you are interested, write for information to American Public Health Association, Professional Examination Service, Attention: Mrs. Ruth Shaper, 1790 Broadway, New York City 19, New York. You will receive payment for each question accepted for Mediquiz.*



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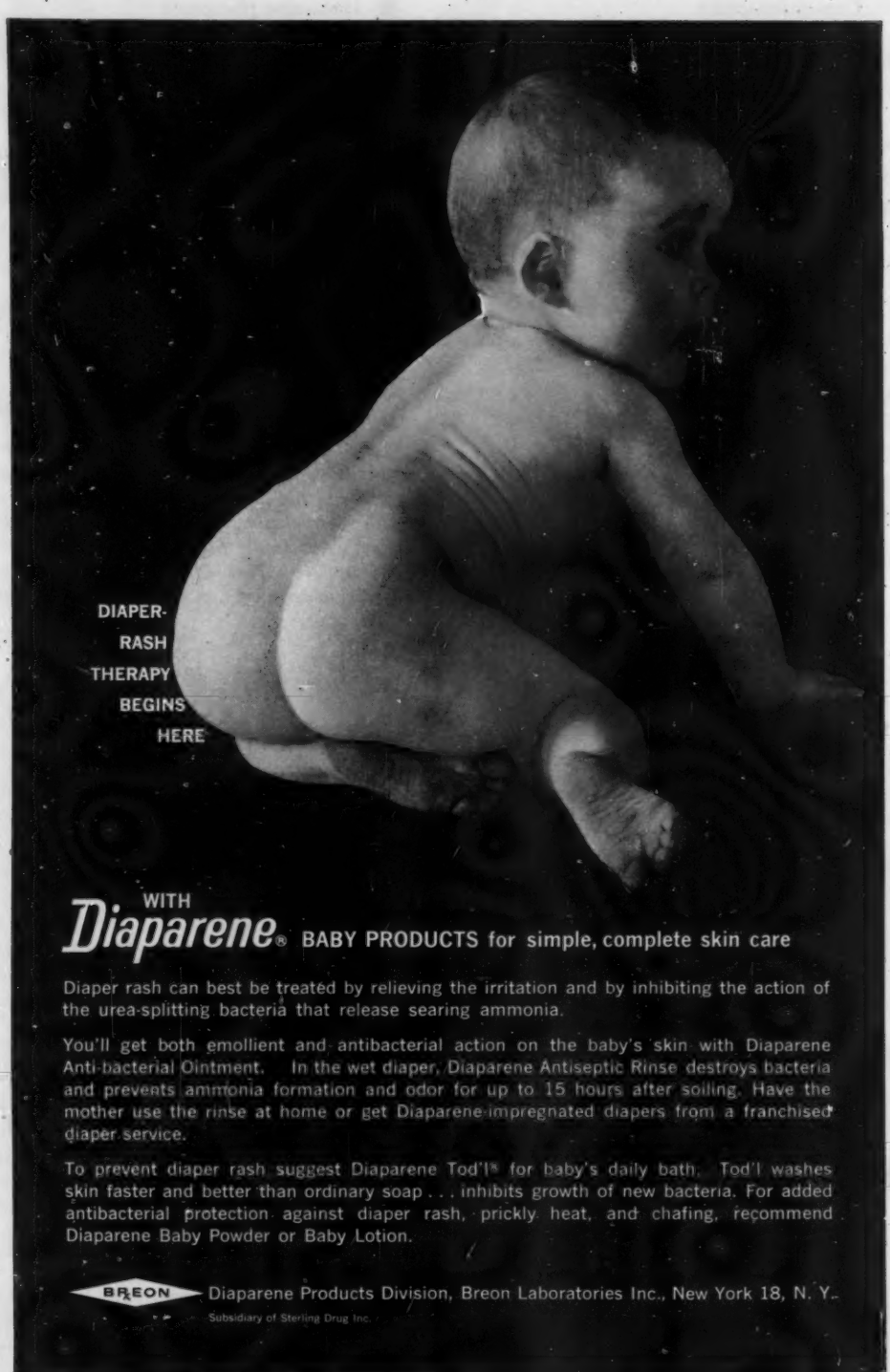
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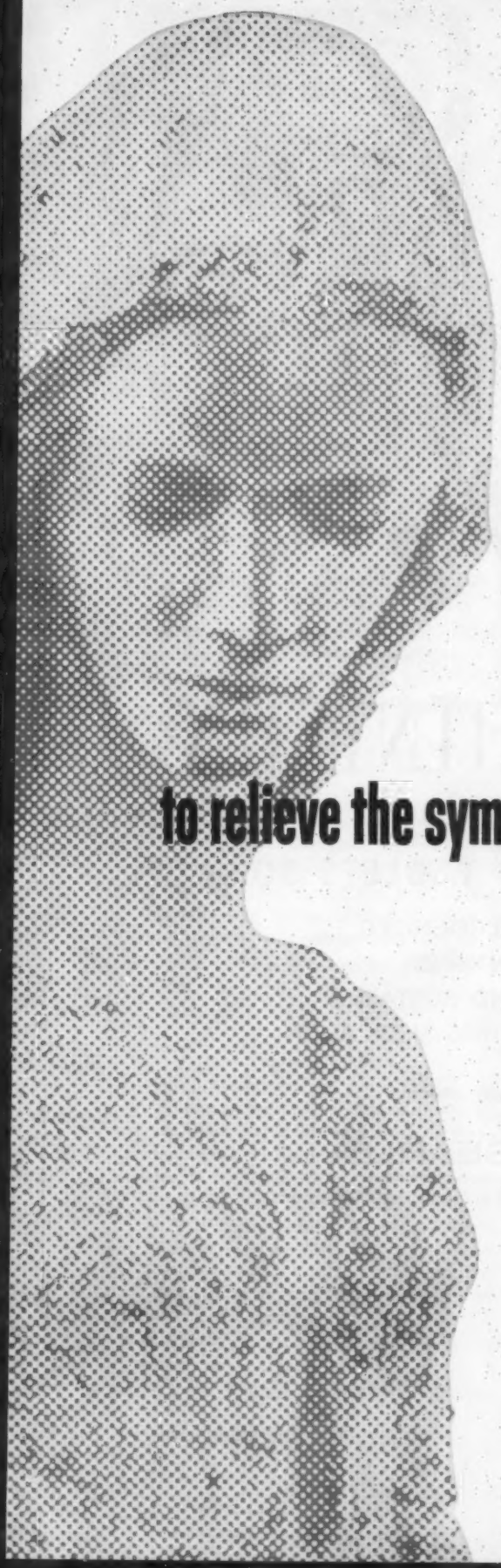
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for GI DISTRESS... CYCLEX affords quick-acting relief of nausea and bloating associated with premenstrual tension

SUPPLIED: Tablets, bottles of 100. Each tablet contains 25 mg. of HYDRODIURIL (hydrochlorothiazide) and 200 mg. of meprobamate.

DOSAGE: Usual adult dosage is one tablet once or twice a day, beginning on the first morning of symptoms and continuing until the onset of menses. CYCLEX may be continued through the menstrual period.

Before prescribing or administering CYCLEX, the physician should consult detailed information on use accompanying package or available on request.

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PROVIDES YOU WITH THE RECOGNIZED
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MODERN MEDICINALS

These brief résumés of essential information on the newer medicinals, which are not yet listed in the various reference books, can be pasted on file cards. This file can be kept by the physician for ready reference.

Bamadex Sequels, Lederle

INDICATIONS: An adjunct to diet in the control of obesity.

DESCRIPTION: Sustained-release capsule that contains 15 mg. of dextroamphetamine sulfate and 300 mg. of meprobamate.

DOSAGE: Orally—one capsule a day, one-half hour before breakfast.

SUPPLY: Bottles of thirty Sequels.

Barbidonna-C-R Tablets, Van Pelt & Brown

INDICATIONS: Designed to provide ten- to twelve-hour sedative-antispasmodic efficacy.

DESCRIPTION: Each tablet contains the active ingredients in orange colored beads compressed into an inert pale orange matrix.

DOSAGE: One or two tablets every ten to twelve hours.

SUPPLY: Bottle of 50s and 500s.

Bejex, Abbott

INDICATIONS: For conditions in which alimentary absorption is impaired, or in chronic diseases complicated by inadequate dietary intake, or increased requirements of the essential nutrients.

DESCRIPTION: Each 5 ml. contains: thiamine HCl, 10 mg.; riboflavin, 10 mg.; cyanocobalamin, 25 mcg.; nicotinamide, 250 mg.; pyridoxine HCl, 5 mg.; ascorbic acid, 500 mg.; sodium pantothenate, 50 mg.; with preservatives, and stabilizers in water for injection.

DOSAGE: 5 ml. may be given daily, intramuscularly or intravenously.

SUPPLY: Single-dose Univial Containers.

Bicillin P.A.B., Injection, Wyeth

INDICATIONS: For penicillin therapy.

DESCRIPTION: Each 4 cc. disposable syringe contains 1,200,000 units benzathine penicillin G and 1,200,000 units procaine penicillin G in a stabilized aqueous suspension with 0.09% methylparaben and 0.01% propylparaben as preservatives. Expiration date—two years.

DOSAGE: One single-dose dispensable syringe.

SUPPLY: One to 99 single dose disposable syringes (20g x 1¼") 4 cc. size.

Coly-Mycin Injectable, Warner-Chilcott

INDICATIONS: Antibiotic for severe acute and chronic resistant urinary tract infections; also effective against Escherichia coli, Aerobacter aerogenes, Klebsiella pneumoniae and Brucella.

DESCRIPTION: Each vial contains 150 mg. of colistimethate sodium, 8 mg. of dibucaine hydrochloride, 10 mg. of citric acid and 50 mg. of sodium citrate.

DOSAGE: Intramuscularly only.

SUPPLY: Vials.

Desitin HC Ointment with Hydrocortisone, Desitin

INDICATIONS: To relieve inflammation, itching, and edema, protect and lubricate the skin, and promote healing in atopic eczematoid dermatitis.

DESCRIPTION: Hydrocortisone 1% (as the alcohol) has been added to the Desitin Ointment formula.

DOSAGE: Topically, a small quantity on the affected skin two to four times daily, using gauze dressings when necessary.

SUPPLY: One-half ounce and one ounce tubes.

Continued on the following page

Continued from page 87a

Cor-D-Tar Cream, Desitin

INDICATIONS: For the treatment of intractable eczematoid states.

DESCRIPTION: Hydrocortisone (alcohol) 1%, diiodohydroxyquinoline 2%, and a special solution of coal tar 3%, in a cosmetic-like pleasant water-miscible base.

DOSAGE: Apply two or three times a day.

SUPPLY: One-half ounce and one ounce tubes.

Decadron Topical Aerosol, MSD

INDICATIONS: In the treatment of allergic dermatoses, atopic dermatitis (allergic eczema), diaper rash, neurodermatitis and neurodermatitis circumscripta, nonspecific anogenital pruritus, pruritus with lichenification, lichen planus, eczematoid dermatitis, stasis dematitis, food eczema, infantile eczema, nummular eczema, and actinic dermatitis. Also in conditions such as sunburn or for insect bites.

DESCRIPTION: Contains 10 mg. of dexamethasone in each 90 Gm. pressurized container with a dispenser that is regulated to release approximately 0.075 mg. of dexamethasone during each second of spray.

DOSAGE: Spray each four-inch square of affected area for one or two seconds two or three times a day.

SUPPLY: 90 Gm. in aerosol can.

Desitin Hydrocortisone Cream, 1%, Desitin

INDICATIONS: Topical therapy for eczematoid, atopic, contact, and stasis dematitis; neurodermatitis; and non-specific anogenital pruritus.

DESCRIPTION: Contains hydrocortisone (alcohol) 1% in a greaseless, water-miscible base.

DOSAGE: Apply a small quantity on the affected skin two or three times daily.

SUPPLY: One-half ounce and one ounce tubes.

Dimocillin, Squibb

INDICATIONS: For treating resistant staphylococcal infections.

DESCRIPTION: Contains 1 Gm. sodium dimethoxyphenyl penicillin, equivalent to 900 mg. of 2,6-dimethoxyphenyl penicillin.

DOSAGE: Adults — Intramuscularly or intravenously, 1 Gm. every six hours. Infants and children—intramuscularly, 25 mg./kg. of body weight every six hours.

SUPPLY: One Gm. bottle.

Dryvax Smallpox Vaccine, Wyeth

INDICATIONS: For smallpox immunization.

DESCRIPTION: Prepared directly from calf lymph which has been purified, concentrated, and stabilized. Drying is accomplished by lyophilization. Polymyxin B, streptomycin and neomycin are added during processing. Phenol is used as the preservative. Expiration date—eighteen months or three months after reconstitution.

DOSAGE: One Gill pin used with vaccine as indicated by the physician.

SUPPLY: One comb. pkg. of one vial of ten immunizations, one disposable syringe containing diluent and one vial of ten Gill Pins; one comb. pkg. of one vial of one hundred immunizations, one disposable syringe containing diluent and one vial of one hundred Gill Pins.

Durabolin-50, Organon

INDICATIONS: For prolonged, intensive anabolic therapy in protracted debilitating illnesses.

DESCRIPTION: Each cc. contains 50 mg. nandrolone phenpropionate in sterile sesame oil with 10% benzyl alcohol. New strength.

DOSAGE: Adults—25 mg. to 50 mg. once weekly by intramuscular injection. Children, two to thirteen years—25 mg. every two to four weeks. For infants—half the children's dose.

SUPPLY: Two cc. vials.

Formulase, Kremers-Urban

INDICATIONS: For relief of colic and related digestive disorders in bottle-fed babies.

DESCRIPTION: Each tablet contains "K-U" standardized proteolytic enzyme, 5 mg.; "K-U" standardized amylolytic enzyme 10 mg.; "K-U" standardized lipolytic enzyme, 20 mg.

DOSAGE: One tablet added to the formula immediately before each feeding. In older children (six months), two tablets at the discretion of the physician.

SUPPLY: Sixty tablets.

Furacin Topical Cream, Eaton

INDICATIONS: For skin infections.

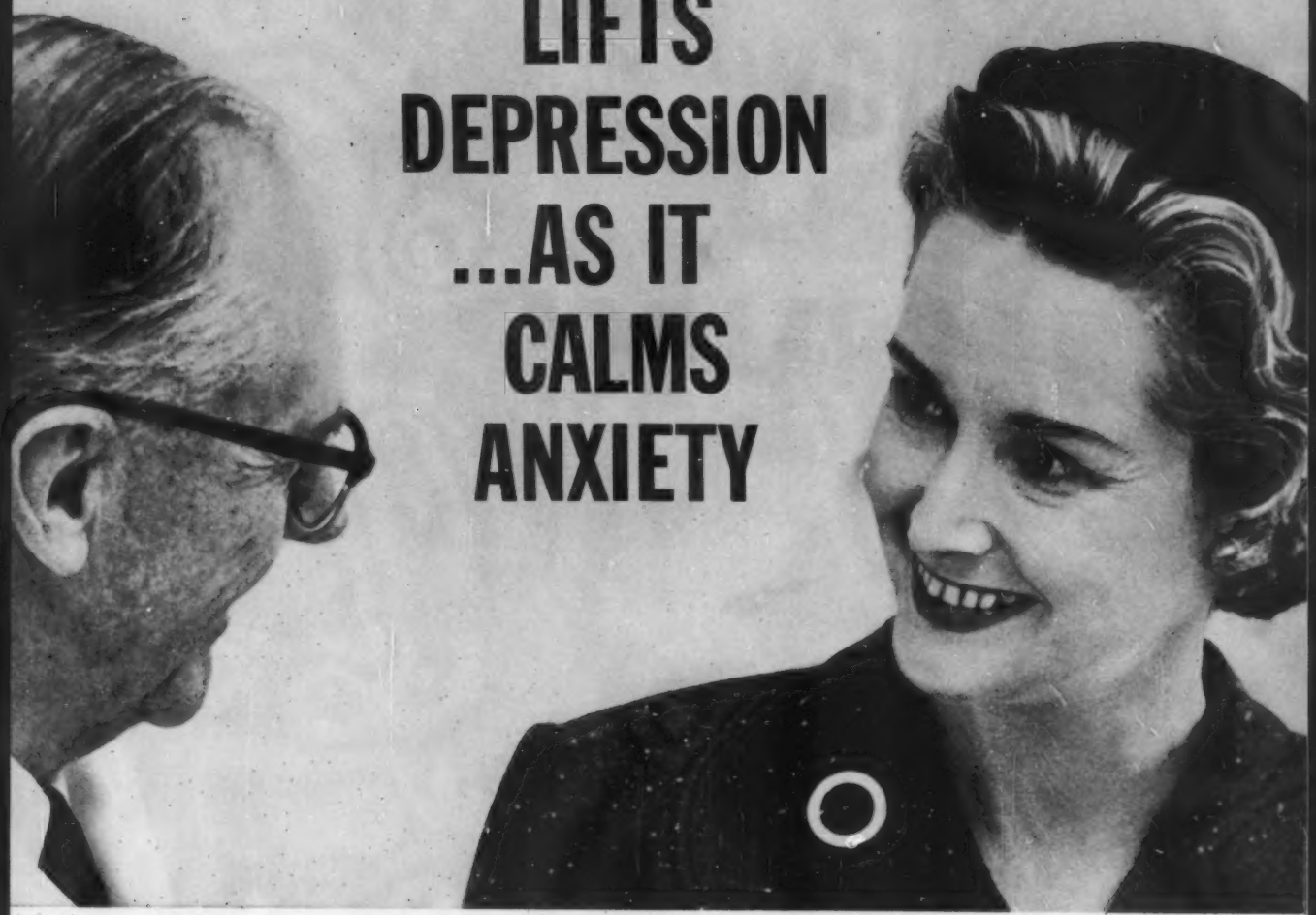
DESCRIPTION: Contains Furacin (nitrofurazone), 0.2%, in water-miscible vanishing cream base.

DOSAGE: As prescribed by the physician.

SUPPLY: Twenty-eight Gm. tubes.

Concluded on page 99a

LIFTS DEPRESSION ...AS IT CALMS ANXIETY



"I feel like my old self again!" Thanks to your balanced Deprol therapy, normal drive and interest have replaced her emotional fatigue.

Brightens up the mood, brings down tension

Balanced action – avoids "seesaw" effects of energizers and amphetamines.

Acts rapidly – you see improvement in a few days.

Acts safely – no danger of liver or blood damage.

Dosage: Usual starting dose is 1 tablet q.i.d. When necessary, this dose may be gradually increased up to 3 tablets q.i.d.

Composition: 1 mg. 2-diethylaminoethyl benzilate hydrochloride (benactyzine HCl) and 400 mg. meprobamate.

Supplied: Bottles of 50 light-pink, scored tablets.

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Mail this coupon for clinical supply of Deprol

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Gentlemen: *Please send me a clinical supply of Deprol for the treatment of depression.*

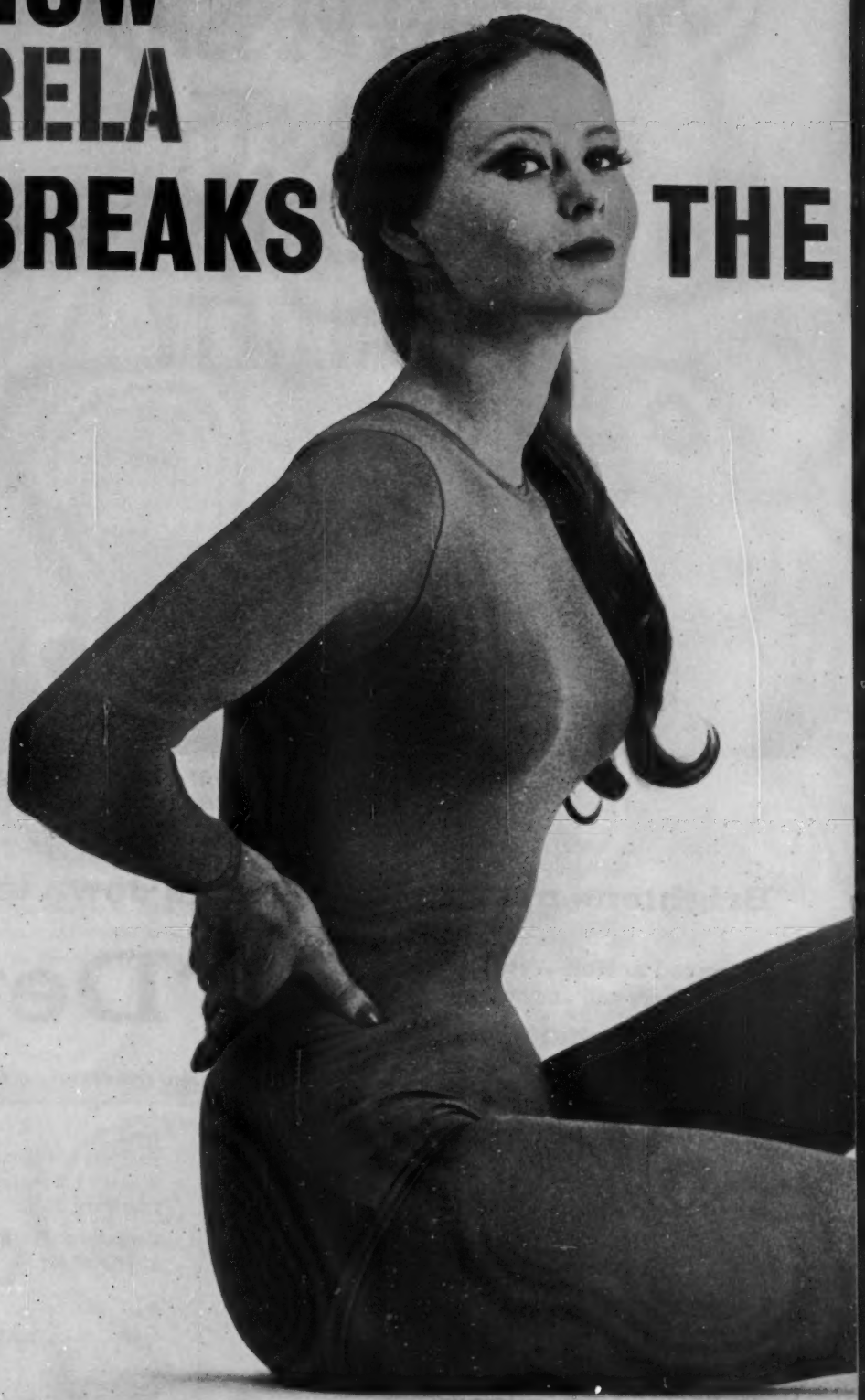
Dr. .....

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City ..... Zone ..... State .....

Type of practice .....

HOW RELA BREAKS THE



Type of practice .....

Schering

PAIN-SPASM-PAIN CYCLE

ANALGESIC: RELA "... diminished the need for administration of analgesic drugs [aspirin, codeine, meperidine]."[1]

MOBILIZATION: RELA restores mobility by relieving pain, stiffness and spasm.

RELAXATION: RELA relaxes, eases acute muscle spasm and pain through its integrated analgesic-relaxant actions.

CLINICAL EFFECTIVENESS: "The effects of carisoprodol [RELA] were shown by relief of pain, and relief of localized muscle spasm...."[1]

RAPID RECOVERY: One fourth the recovery time–RELA treated group of 106 low-back patients averaged 11.5 days–control group, 41 days.[1]



Complete information on RELA including indications, dosage, side effects, and precautions is available to physicians on request.

RELA™ RELAXES, EASES ACUTE MUSCLE SPASM & PAIN

CARISOPRODOL 350 mg. TABLETS

Bibliography: 1. Kestler, O. C.: *J.A.M.A. 171*:2039 (April 30) 1960.



JANUARY 1961 R-352

For those women who prefer or require an arc-ing type diaphragm,

The New Ramses® BENDEX®

embodies all of the superior features of the conventional Ramses Diaphragm, together with the very best hinge mechanism contained in any arc-ing diaphragm: a thin, thin dome of pure gum rubber, a flexible cushioned rim for comfort, with just the right lateral tension to give anterior-posterior rigidity and spermtight fit. Easily inserted, placed and removed; no introducer required; ideal for use with Ramses 10-hour spermicidal jelly. Prescribe Ramses "TUK-A-WAY"® Kit #703 containing Ramses BENDEX Diaphragm sized 65 to 90 mm., and Ramses Vaginal Jelly in 3 oz. tube. RAMSES, BENDEX, and "TUK-A-WAY" are registered trade-marks of Julius Schmid, Inc.





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423 West 55th Street, New York 19, N. Y.



In summer respiratory allergies,
the treatment problem is to relieve congestion. Valuable as antihistamines are against sneezing, itchy, weeping eyes and rhinorrhea, they are less effective against nasal congestion.[1]

NOVAHISTINE® DECONGESTS

Novahistine provides more than simple antihistaminic effect. It shrinks congested mucous membranes (nasal, pharyngeal, laryngeal, conjunctival), opens up air passages, promotes sinus drainage, and helps prevent mouth breathing.

NOVAHISTINE LP TABLETS

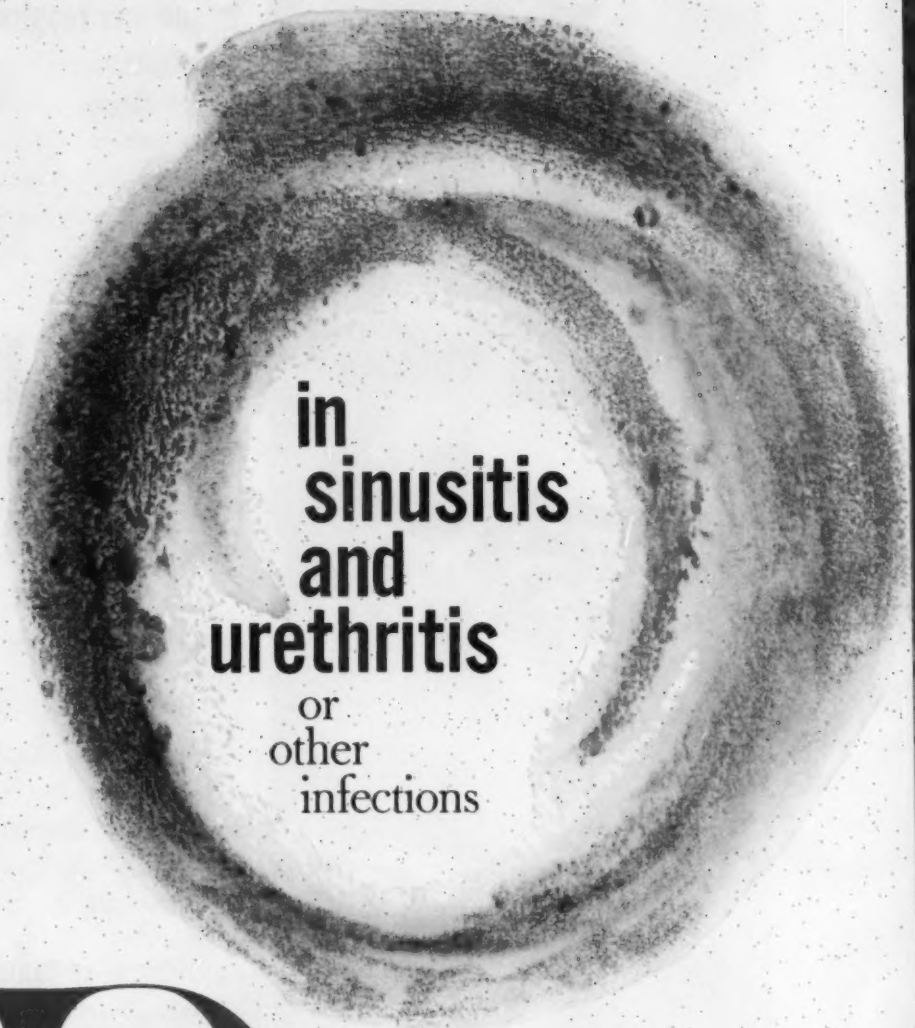
8 to 12 hour relief with a single adult dose of 2 tablets. Each tablet contains 25 mg. phenylephrine HCl (a vasoconstrictor that does not increase pulse rate) and 4 mg. chlorprophenpyridamine maleate (a potent, well-tolerated antihistamine).

NOVAHISTINE ELIXIR

exceptionally palatable liquid that children like to take. Each 5 ml. teaspoonful contains 5 mg. phenylephrine HCl and 2 mg. chlorprophenpyridamine maleate.

1. Beckman, H.: *Pharmacology: The Nature, Action and Use of Drugs*, 2nd Ed. W. B. Saunders Company, Philadelphia and London, 1961, p. 673.

PM
PITMAN-MOORE COMPANY
Division of The Dow Chemical Company
Indianapolis 6, Indiana



antibiotic therapy with

DECLO

CAPSULES, 150 mg., 75 mg. *Dosage:* Average infections—150 mg. four times daily. Severe infections—Initial dose of 300 mg., then 150 mg. every six hours.

PEDIATRIC DROPS, 60 mg./cc. in 10 cc. bottle with calibrated, plastic dropper. *Dosage:* 1 to 2 drops (3 to 6 mg.) per pound body weight per day—divided into four doses.

SYRUP, 75 mg./5 cc. teaspoonful (cherry-flavored). *Dosage:* 3 to 6 mg. per pound body weight per day—divided into four doses.

PRECAUTIONS—As with other antibiotics, DECLOMYCIN may occasionally give rise to glossitis, stomatitis, proctitis, nausea, diarrhea, vaginitis or dermatitis. A photodynamic reaction to sunlight has been observed in a few patients on DECLOMYCIN. Although reversible by discontinuing therapy, patients should avoid exposure to intense sunlight. If adverse reaction or idiosyncrasy occurs, discontinue medication.

Overgrowth of nonsusceptible organisms is a possibility with DECLOMYCIN, as with other antibiotics, and demands that the patient be kept under constant observation.

LEDERLE LABORATORIES, a Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

an added measure of protection

MYCIN®

DEMETHYLCHLORTETRACYCLINE LEDERLE

against relapse— up to 6 days' activity on 4 days' dosage

against secondary infection— sustained high activity levels

against "problem" pathogens— positive broad-spectrum antibiosis



Rheumatoid arthritis

Use of oral Medrol:

In severe or moderately severe cases, initial dosage of Medrol tablets is 8 to 16 mg. daily; maintenance dosage ranges from 4 to 12 mg. daily, adjusted stepwise every 5 to 10 days in accordance with response. In children, and also in adults with moderate disease, both initial and maintenance dosage is Medrol 4 to 8 mg. daily.

"It [methylprednisolone] is potent and displays a slightly improved 'safety' record, showing a reduced frequency of disturbing side-effects as compared with the other steroids."

—Neustadt, D. H.: J.A.M.A. *170*:1253 (July 11) 1959.

Medrol*

Upjohn

75th year

Indications and effects

Medrol benefits (anti-inflammatory, antiallergic, antirheumatic, antileukemic, antihemolytic) have been demonstrated in acute rheumatic carditis, rheumatoid arthritis, asthma, hay fever and allergic disorders, dermatoses, blood dyscrasias, and ocular inflammatory disease involving the posterior segment.

Precautions and contraindications

Because of Medrol's high therapeutic ratio, patients usually experience dramatic relief *without* developing such possible steroid side effects as gastrointestinal intolerance, weight gain or weight loss, edema, hypertension, acne, or emotional imbalance.

As in all corticotherapy, however, there are certain cautions to be observed. The presence of diabetes, osteoporosis, chronic psychotic reactions, predisposition to thrombophlebitis, hypertension, congestive heart failure, renal insufficiency, or active tuberculosis necessitates careful control in the use of steroids. Like all corticosteroids, Medrol is contraindicated in patients with arrested tuberculosis, peptic ulcer, acute psychoses, Cushing's syndrome, herpes simplex keratitis, vaccinia, or varicella.

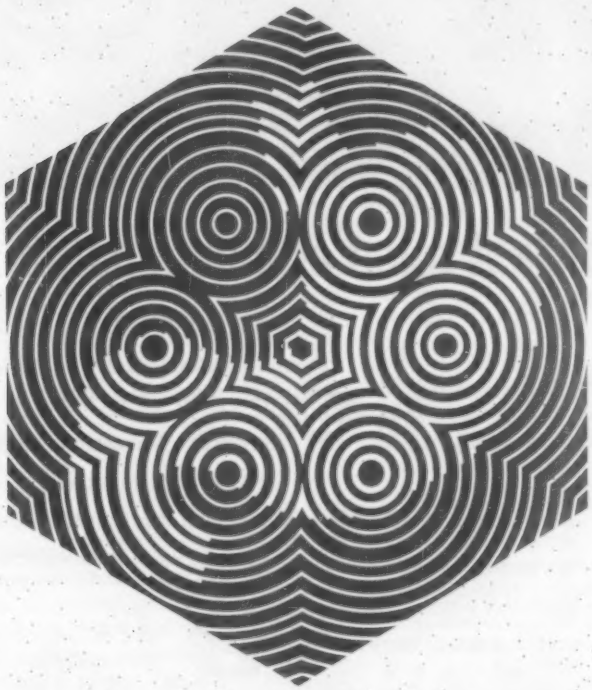
Each tablet contains: Medrol (methylprednisolone) . . . . . 2, 4, or 16 mg.
Medrol is supplied as 2 mg. tablets in bottles of 30 and 100; as 4 mg. tablets in bottles of 30, 100 and 500; and as 16 mg. tablets in bottles of 30.

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"UPSET STOMACH" ON DIGITALIS 52-year old male had rheumatic heart disease, cardiomegaly Grade II, auricular fibrillation, mitral stenosis, mitral insufficiency, and was in class III-C. For 17 months he had been in failure. Three grains of digitalis daily were required for effective maintenance therapy. When the patient began to complain of frequent "upset stomach", he was placed on digitoxin, with an alternating 0.1 and 0.2 daily maintenance dose. Nausea became very severe after two months, and digitoxin was decreased to 0.1 mg. daily. Congestive failure increased and rehospitalization was necessary. Patient was given GITALIGIN, 0.5 mg. q.i.d. for two days, then 1.5 mg. daily for six weeks, followed by 1.0 mg. per day with 1.5 mg. every third day. Failure was effectively controlled without toxicity.[1]

"DIGITALIS TOXICITY IS SEEN WITH INCREASING FREQUENCY TODAY..."[2]



for maximal digitalis activity with minimal toxicity

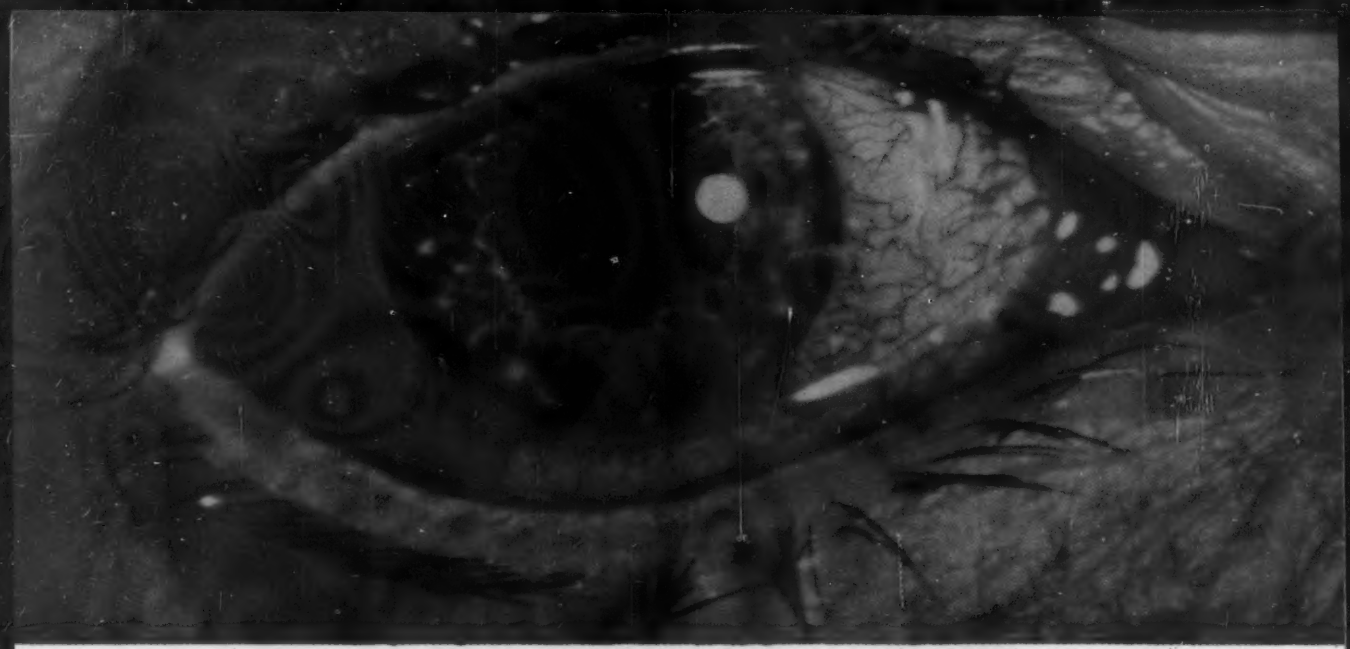
Gitaligin®†

"...patients who became toxic very readily with other agents could later be satisfactorily digitalized with gitalin (GITALIGIN)."[2]
Wider margin of safety—frequently effective in patients refractory to other digitalis glycosides • broader clinical utility—therapeutic dose only ⅓ the toxic dose • faster rate of elimination than digitoxin or digitalis leaf. □ Supplied: 0.5 mg. scored tablets—bottles of 30 and 100.

1. Dimitroff, S. P. et al.: Ann. Int. Med. 39:1189, 1953. 2. Pastor, B. H.: GP 22:85, 1960.

†amorphous gitalin, White

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acute conjunctivitis before treatment

clinical photographs

truly soluble—for fast relief of inflammation

0.1% OPHTHALMIC SOLUTION

NeoDecadron®

DEXAMETHASONE 21-PHOSPHATE—NEOMYCIN SULFATE

INDICATIONS: Trauma—mechanical, chemical or thermal; inflammation of the conjunctiva, cornea, or uveal tract involving the anterior segment; allergy; blepharitis.

CAUTION: Steroid therapy should never be employed in the presence of tuberculosis or herpes simplex.

NeoDECADRON is also available as the ophthalmic ointment (.05%). Ointment and solution are available with dexamethasone 21-phosphate alone: DECADRON® Phosphate Ophthalmic Solution and DECADRON Phosphate Ophthalmic Ointment.

• unexcelled steroid activity • in true solution for peak effectiveness . . . maximal contact at the site of the lesion • superior patient comfort—no irritating particles • quick-acting, broad antimicrobial activity.

Additional information is available to physicians on request.
NeoDECADRON and DECADRON are trademarks of Merck & Co., INC.

MERCK SHARP & DOHME
Division of Merck & Co., INC., West Point, Pa.

4 days after treatment



Modern Medicinals

Concluded from page 88a

Haldrone, Lilly

INDICATIONS: For the treatment of collagen diseases, allergic diseases, dermatological disorders, hematological diseases, and miscellaneous disorders.

DESCRIPTION: Contains paramethasone acetate, a synthetic and corticosteroid with marked anti-inflammatory activity.

DOSAGE: If the condition is acute or severe and an immediate response is needed, a large, or suppressive, dosage is indicated. After several days of a satisfactory response, the dose should gradually be reduced.

SUPPLY: 1 mg., 2 mg., in 30's, 100s, 500s.

Lyophrin, Alcon

INDICATIONS: Chronic simple glaucoma.

DESCRIPTION: Contains 1-epinephrine bitartrate, 2%; sodium bisulfite, 0.2%; chlorobutanol, 0.15%; boric acid, disodium ethylenediaminetetraacetate, distilled water.

DOSAGE: One drop administered at bedtime.

SUPPLY: 5 cc. bottle.

Parenzyme Aqueous, National

INDICATIONS: Reduces inflammation, eases pain and speeds healing in lacerations, contusions, cellulitis, phlebitis, ulcerations and after surgery.

DESCRIPTION: Single dose package contains 12,500 units N.F. (5 mg.) lyophilized trypsin, the other 1 ml. aqueous diluent. The diluent contains 5% denatured gelatin and preservatives methylparaben 0.09% and propylparaben 0.01%.

DOSAGE: One ml. once or twice daily. For severe acute conditions, two daily injections until inflammation begins to subside, then once daily or less frequently as indicated. For infants and children up to two years, 0.2 ml. Older children 0.5 ml.

SUPPLY: Two vial units in packages of four.

Perithiazide SA, Warner-Chilcott

INDICATIONS: For coronary artery disease complicated by heart failure and/or high-blood pressure.

DESCRIPTION: Each sustained-action tablet contains 80 mg. of pentaerythritol tetranitrate, and 25 mg. hydrochlorothiazide.

DOSAGE: One tablet before breakfast and one twelve hours later.

SUPPLY: Bottles of 100 tablets.

Prozine, Half-Strength, Wyeth

INDICATIONS: For patients who experience drowsiness on full dosage.

DESCRIPTION: Each capsule contains meprobamate, 100 mg. and promazine HCL, 12.5 mg.

DOSAGE: One or two capsules b.i.d. or t.i.d.

SUPPLY: Fifty capsules.

Synalar, Syntex

INDICATIONS: For topical therapy of a wide variety of inflammatory dermatoses including atopic dermatitis, neurodermatitis, contact dermatitis, seborrheic dermatitis, eczematous dermatitis, nummular eczema, pruritus and certain lesions of psoriasis.

DESCRIPTION: Contains fluocinolone acetonide.

DOSAGE: For topical use only. A small amount applied lightly to the affected skin areas two or three times daily. The cream should be rubbed in gently until it disappears.

SUPPLY: Fifteen Gm. collapsible tubes.

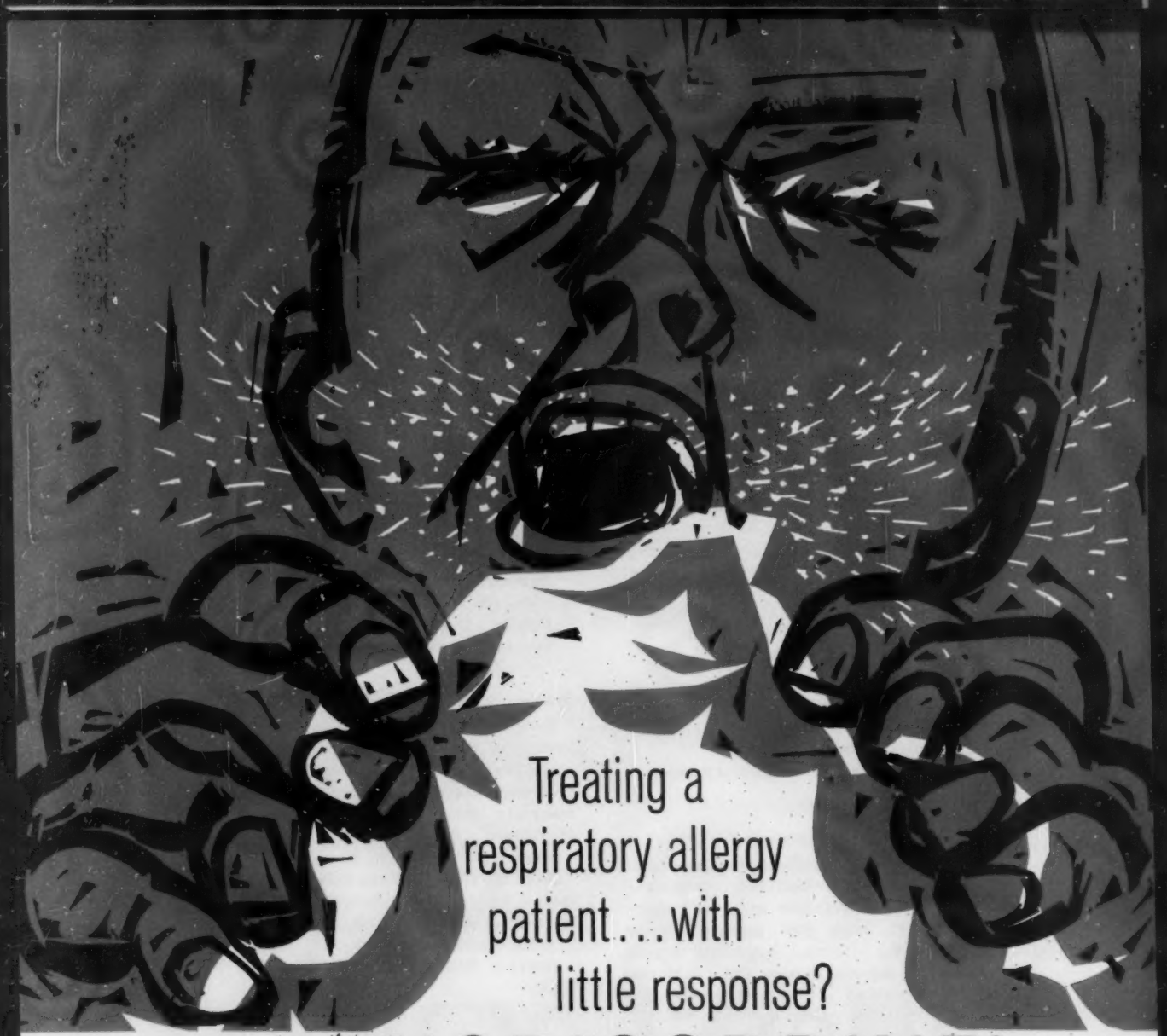
Trepidone, Lederle

INDICATIONS: For the treatment of mild to moderate anxiety and tension. It is also useful for the reduction of muscular spasm.

DESCRIPTION: Each tablet contains Mephenoxalone, 400 mg.

DOSAGE: Adult—One tablet four t.i.d. Children—doses are proportionately smaller. Higher than tranquilizing dosages may be required in the treatment of muscular spasm.

SUPPLY: Bottles of fifty.



Treating a respiratory allergy patient...with little response?

try NORISODRINE® syrup

(Isoproterenol Sulfate, Abbott)

with calcium iodide

You've seen the type. Racked by a chronic cough . . . or wheeze . . . or any of the other classic asthma symptoms. In any event, the usual treatment isn't affording adequate relief.

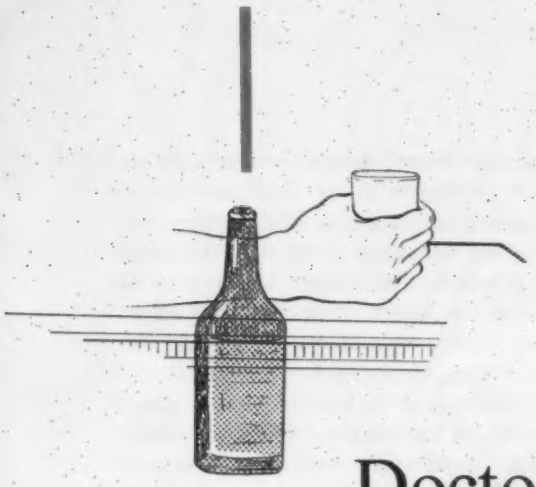
If you're faced with this kind of "problem" patient, try this: Put him on Norisodrine Syrup for two weeks—one or two teaspoonfuls, four to six times daily. See if this isn't evident:

Coughing will be more productive . . . and much less frequent. There will be a marked lessening of tension, physical and mental. Respiration will improve. Nighttime cough, particularly, will be relieved.

Good-tasting Norisodrine Syrup—a combination of Norisodrine (bronchodilator) and calcium iodide (expectorant)—can help you control symptoms in patients of all ages, even those who have been troubled for years.

ABBOTT

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Doctors and Alcoholism

The most curious situation in American medicine today has to do with the care of alcoholics. There is no responsible medical group which does not regard alcoholism as a medical illness; there is no responsible medical group which sets up standards of treatment. There is no disease which more urgently requires hospital treatment in its acute phase; and there is no other group of patients who are more consistently denied hospitalization. While there is no more prevalently important disease, there is none that is so continuously ignored by the medical profession.

ALLEN A. PARRY, M.D., Madison, New Jersey

The treatment of alcoholics presents an anomaly which physicians will not be able to continue to ignore. The very existence of alcoholism seems to constitute a blind spot to the medical profession; they act as though, if they paid no attention to it, it would go away. Individual doctors ignore it, or give some palliative medications and some bland advice to the effect that it would be better if this individual patient stopped, or decreased, his drinking.

This disease is a major medical problem—perhaps the most important medical problem which is not being met head-on by the profession. Most physicians have a fairly accurate idea as to the accepted treatment of patients with heart disease and with cancer in its various aspects and locations. Most physicians recognize the more serious aspects of mental illness and see that such patients are referred for proper psychiatric therapy.

Yet here we have a vast number of patients who desperately need help and our physicians, as a whole, do not know whether they fall into the classification of psychiatric patients, or how to treat them if they do not. I can think of no field of medicine in which there is such universal ignorance as that of the management of the alcoholic patient.

The acute alcoholic episode is usually managed by a general practitioner or by an internist. Though generally badly managed, most of these patients survive, because their metabolism has not been sufficiently deranged to make

Dr. Parry is Chief of Alcoholic Service, The Morristown Memorial Hospital, 100 Madison Avenue, Morristown, New Jersey.

ages, even those who have been troubled for years.

them succumb, despite the bad medical management.

The therapy of the acute alcoholic episode does not vary too much. It involves the use of very large doses of parenteral tranquilizers or sedation, parenteral vitamins, infusions to restore fluid balance, specific treatment of convulsions if they occur, and restraints and further sedation in the event that hallucinosis or delerium tremens supervene. It should be noted that the national death rate in delerium tremens is approximately fifteen percent. Yet seldom, if ever, is a program entertained at the time of admission of such patient to eliminate the possibility of convulsions or delerium tremens. Considerable recent work in this field has given us more indication that such complications can be avoided. Clinic trials with intravenous amino acids have been promising; the finding of a reduced serum magnesium in patients with impending delerium tremens is certainly of some importance. It is quite probable that in the future the therapy combining parenteral sedation and vitamins, plus parenteral fluids and amino acids, plus the judicious use of magnesium sulfate intramuscularly, may entirely prevent the incidence of convulsions and delerium tremens in these patients, and thus significantly reduce the mortality that has been incurred in the past. Furthermore, we have still to investigate new drugs which, when parenterally given, may reduce the motor excitability in these patients.

The future of the treatment of these acutely ill alcoholics is bright. But by and large doctors are not aware of the changing outlook for these patients. The physicians do not readily adjust their therapy to new discoveries. They are altogether too likely to accept a period of hallucinosis with its accompanying physical restraints as inevitable. There is a curious attitude on the part of doctors to disdain these patients, to feel that they somehow deserve all the unpleasant and dangerous consequences which occur as part of their disease. It is as though the medical profession wanted to punish them for their illness.

To me, this is the crux of the matter. Is this disease to be regarded uniformly by the medical profession as an illness, a view to which every responsible medical body has subscribed and with which every physician should be sympathetic and helpful; or is it to be viewed as a weakness, a lack of restraint which, to the physician, seems very much like the antics of a wayward child?

A great body of the literature on the subject of alcoholism has emanated from two sources. First, the psychiatrists have devoted a great deal of attention to these patients. Their approach rests upon the premise that these people are always maladjusted in areas other than those concerning their alcoholism. It seems to me that half a century of unsuccessfully attempting to classify these patients in psychiatric terms should be adequate demonstration that their basic premise is at fault. In any large group of alcoholics, the only common factor is an intolerance to alcohol. I think this statement can be flatly made in view of the inability of the psychiatrists to demonstrate basic dependency, homosexuality, neuroses, and character deviations of any consistent sort. It should appear obvious that, if one starts with the premise that all drinking, social or otherwise, is undertaken in an attempt to relieve tensions, one must necessarily arrive at a conclusion that has some psychiatric implications. This, it seems to me, is the basic fault of the Yale School of Alcoholic Studies.

I should like to maintain that no such situation exists. People start drinking socially because they like it; they are basically not attempting to escape from something. After a period of drinking, approximately six to ten percent of people find that they are intolerant to alcohol. They cannot control it and it usually becomes a compulsion in the sense that after the first drink they have no idea how many they will consume. There is a substantial group of patients who maintain that they have never in their lives had any real control over alcohol; they drank themselves into unconsciousness the very first time they took an alcoholic beverage, perhaps in their teens, and

this pattern was maintained on every successive attempt to drink.

Presumably in the portion of the population which does not drink, a similar percentage would develop an intolerance to alcohol if they drank and permitted their intolerance to become obvious. It would seem that there are some ethnic implications here. It is well known that the highest incidence of alcoholism is in the North European population; i.e., Scandinavians, Poles, North Germans, French, Russians, Scots and Irish. It seems to us that the descendants of these racial groups are likewise apt to become subject to this disease, regardless of the circumstances of living in which they find themselves, even in this country.

A great mistake made by the psychiatrists is that, after a long period of analysis, they attempt to tell the patients why they drink. During this period of analysis, most of the patients continue to drink and finally emerge with the triumphant fact that the psychiatrists have told them why they were drinking. Now they are drinking for a reason whereas formerly they had none. But they are still drinking. Very few (two to five percent) of these patients stop drinking. Perhaps a larger percentage than that stop on their own, without assistance of any sort, if they have sufficient social motivation.

Now it is a simple fact that if you ask alcoholics why they are drinking, those who are still drinking will answer, "I like it;" those who are not drinking will say, "I don't know." It seems obvious to me if the psychiatrists have been unable, after all these years, to unearth a basic pattern of frustration, immaturity or other personality disorders, that no such pattern exists and that their basic premise is incorrect.

From a causational point of view, there would appear to be more validity to the theory proposed by Dr. Roger Williams, of Austin, Texas, that there is a basic metabolic defect in these people, perhaps inherited, not necessarily always the same one but always resulting in a nutritional or enzymatic defect of some sort.

The second source of literature on this subject emanates from the experiences of members of Alcoholics Anonymous. Here the medical profession is in a very curious position. *A great many physicians refer patients to Alcoholics Anonymous for treatment because they do not know how to handle the situation themselves. I do not decry this, but it should be pointed out that there is in all medical history no comparable situation where a large segment of the medical profession refers patients to a lay group for the treatment of what is admittedly a medical problem in the field of toxicology.*

This brings me to the point that the medical profession, by and large, is neither trained nor equipped to handle the problem of alcoholism after the recovery from the acute phase. Perhaps this is not the fault of the doctors. They receive little or no training in this subject, possibly because their teachers are as baffled by it as they are. But it does seem that more than a very few members of our profession should acquaint themselves with the management of this disease. To be sure, we can learn much from Alcoholics Anonymous and we can learn something from the psychiatrists, but we can learn most from the patients themselves.

Those of us who have dealt with this disease know that frequent contact with the patient is of utmost importance. We have to be sympathetic to their problems. Certainly, we do not condone the diabetic who goes off his diet, nor the cardiac who indulges in too much exercise, nor a patient with tuberculosis who takes insufficient rest; yet it seems to me that we have more sympathy, more understanding, and a less disdainful attitude for these people than we do toward the alcoholic who even temporarily suspends his life of sobriety.

Medically there are ways of helping to sustain these people in their attempts to do without alcohol.

From the point of view of diet, they should have in general high protein intake; yet we must not neglect the periods when they become tense and jittery and normally would resort to alcohol. At such time, an immediate

intake of carbohydrates is extremely helpful and important.

Medications to assist in sleeping are also most important. Most alcoholics, when they become "dry," experience a period of insomnia. If this is permitted to continue, an almost uncontrollable desire to drink may follow, either from sheer fatigue or from the anxieties that so often accompany nighttime wakefulness. The alcohol acts as a sedative, thereby permitting them to sleep, and so starts the drinking pattern again.

Further vitamin therapy, in excess of that which would normally be expected to be adequate, must be supplied to these patients. It has been shown that both the absorption and utilization of vitamins in these patients have been inadequate for a long time. The subjective improvement of these people on very large doses of oral vitamins is often astonishingly good, even in the absence of such obvious vitamin deficiencies as peripheral neuritis and pellagra.

A factor which must be regarded as extremely important is the incidence of medical illness found in these patients which is either totally unrelated to their alcoholism, or which is ignored by them as being a natural by-product of it. Aside from liver disease, which is probably a result of their drinking combined with an inadequate dietary intake, we have other diseases which may, or may not, be related to alcoholism. The question of peptic ulcer, the incidence of which is high in alcoholics, leaves room for some debate. In Scandinavia, the theory has recently been proposed that the ulcer usually *precedes* the excessive intake of alcohol rather than being the *result* of it.

In my experience, this is true in at least half of the cases, and a sub-total gastric resection often is a very definite aid in the management of the alcoholic problem.

Furthermore, we are confronted with a host of illnesses which have nothing whatsoever to do with alcoholism and which are the usually occurring diseases in any segment of the population. It is perhaps natural for alcoholics to avoid medical assistance for most of their symptoms which they unconsciously attribute to their drinking. As a matter of fact, there is probably not a single segment of the population which ignores warning medical symptoms as consistently as do alcoholics, except Christian Scientists.

We know that the incidence of tuberculosis in alcoholics is about twelve percent. This is related to their careless nutrition and living habits. But who knows how many patients with latent hypothyroidism drink to keep going? Or how many mild hyperthyroids drink to prevent nervousness? How many patients with decreased adrenal cortical function drink to make themselves feel more nearly normal? How many hypertensives use alcohol as a mild sedative? This list could be projected *ad infinitum*, but it merely suggests that a physiological basis for this excessive consumption may rest on quite as firm a foundation as the psychiatric thesis of a pre-existing emotional maladjustment.

Medical management of these patients should include the discovery and correction of such conditions, a situation which never results when these patients are treated by Alcoholics Anonymous alone, and practically never results when they are treated by psychiatric methods alone.

In our further relations with the patient, we know that we must provide him with the philosophy of life which involves productivity, activity and good family relations without alcohol. We know that he must be made to be proud of his accomplishments, of his relations with people, and of his situation in the community while he is not drinking. We also know, and this may be the most important factor of all, that his family and close friends must lend him sympathetic, moral support without censure or criticism of his past faults, or indeed, of his present ones if he momentarily fails to hew the line. This involves extensive re-education of the family, especially the spouse of the alcoholic, who is often fed up, critical and disgusted to the point where the possibility of future normal rational behavior on the part of the alcoholic is

neither expected nor even hoped for. With proper sympathetic cooperation on the part of the family, the doctor and the patient, such behavior may certainly in many instances be anticipated.

Alcoholism, like many other diseases which we treat medically, cannot be cured. However, as in cases of diabetes, heart disease and many other medical conditions, it can be contained. Its containment demands constant vigilance, cooperation and understanding on the part of all concerned in its management.

Summary

Alcoholism is a disease that afflicts between six and ten percent of that segment of the population which consumes alcoholic beverages. It afflicts all segments of the population, irrespective of social, or economic background and apparently irrespective of personality type; it may, however, have a racial, or hereditary, component.

Successful treatment demands a great deal of time and frequent contact between an understanding physician and the patient, plus his family; but a search for underlying neuroses or psychiatric components is usually unproductive. These people seem to be merely a cross-section of the population so far as their psychiatric status is concerned. Careful attention to the problems that have been created by their drinking is important to their ultimate rehabilitation. We have attempted to outline the steps which we consider most important in the management of these admittedly very difficult patients.

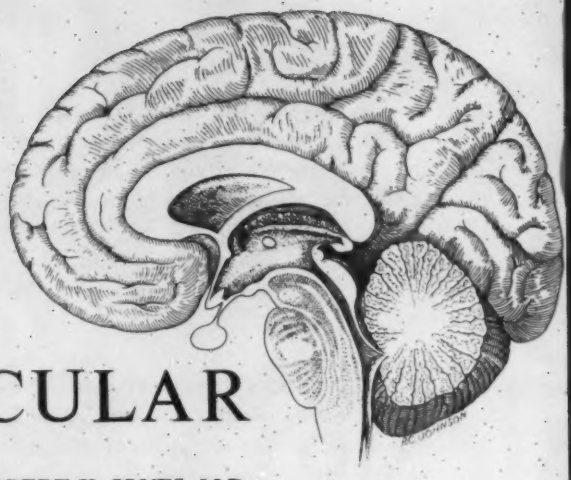
54 Green Avenue

THE INHERITANCE OF ESSENTIAL PENTOSURIA

The unusual occurrence of xyloketosuria is reported in a mother and her two children. The family had originated from known pockets of high incidence for xyloketosuria in Poland and Russia. An extensive survey of the family showed no further cases.

P. D. ROBERTS, M.D.

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CEREBROVASCULAR DISEASE

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The problem of cerebrovascular disease is such a tremendously large one that only a very small segment of it will be herein considered; i.e., the controversial points relating to recent developments in the treatment of "stroke" patients, and a brief discussion of a small series of patients with occlusive cerebrovascular disease who have been treated surgically.

The treatment of cerebrovascular disease has progressed considerably since the time that all such cases were grouped as "strokes" and after the initial ictus were left to vegetate until they died. This period of prolonged chronic illness constituted a very unhappy time for both the patient and family responsible for their care.

Because of the change in age distribution of our population, the frequency of cerebrovascular disease has increased and it now constitutes one of the larger medical problems that we presently have to deal with.

As further information is gleaned about the pathophysiology of the cerebral circulation, and refined diagnostic procedures have come into common usage, a more definite classification of these patients can be made and a direct and vigorous treatment can often be successfully undertaken.

The present interest in the vascular aspects of neurological surgery had to await the development of newer techniques in diagnosis, and that want was satisfied by the development of arteriography. Even this, however was not initially utilized in the evaluation of "stroke" patients. Instead, it was directed toward the more exact diagnosis of brain tumor and congenital aneurysm.

About six years ago, a Canadian, by the name of Fisher, analyzed a large series of "stroke" patients with special reference to the cervical portion of the carotid artery. He showed that there was a very high incidence of carotid thrombosis in patients clinically diagnosed as having "cerebrovascular disease." Shortly after this, a clinical picture, supposedly suggestive of carotid artery thrombosis was popularized by a number of papers published in the Canadian, English and American literature. Very probably, this syndrome was well known to neurologists before that time, but I think that it was this rash of papers that stimulated the neurological surgeon to become interested in this problem. With arteriography as the available means to establish the exact

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point of occlusion or impaired circulation, it seemed feasible to consider operating on these patients.

Though isolated operations to remove emboli and thrombi from the carotid system in the neck had been done for a number of years, Gurdjian and Webster compiled the first large series of such cases in this country. Their initial report as to the improvement of their patients postoperatively was glowing, and subsequent reports from this group continue to be optimistic. Their operative techniques and indications for operation have remained essentially unchanged for the past few years.

To my knowledge, the first successful operation for the removal of an intracranial vascular occlusion was done about four years ago in this country, by Dr. K. Welsh, of the University of Colorado. He has done a number of similar operations since, as have other individuals in various neurological centers in this and other countries. I believe that the development of hypothermic techniques fostered the interest in trying intracranial thrombectomies and embolectomies.

The results of these operative procedures mentioned above have been variable. This variability probably depends on the skill of the surgeon, the interval between the onset of the symptoms and operation, and the vagaries of circulation of the individual patient's brain.

This discussion deals with fifteen patients that were operated on in an attempt to correct a vascular insufficiency to a portion of the brain. These fifteen patients are culled from a series of fifty-five "stroke" patients for whom a neurosurgical opinion was requested. Since not all of these patients were referred by neurologists, the diagnostic acumen as to the pathalogy present was not as good as one might expect. Of the fifty-five patients, it was decided that no arteriogram should be done in twenty-two, because their clinical picture suggested some other disease. Follow-up evaluations substantiated our opinions in this group that we were not dealing with primary vascular disease. Of the thirty-three patients on whom it was felt that arteriography was indicated,

TABLE 1 55 UNSELECTED "STROKE" PATIENTS

DECISION THAT NO ARTERIOGRAM WAS INDICATED		22
DECISION THAT ARTERIOGRAPHY WAS INDICATED		33
1. *Essentially normal arteriograms*		9
(a) Died	3	
(b) Unchanged	5	
(c) Improved	1	
2. *"Positive" arteriogram, but surgery deemed inadvisable*		9
(a) Died	7	
(b) Unchanged	2	
(c) Improved	0	
3. *"Positive" Arteriogram and in whom surgery was done*		15
(a) Died	3	
(b) Unchanged	3	
(c) Improved	9	
(1) Good	3	
(2) Fair	6	

nine had normal arteriograms. In this group of nine, three died, five remained essentially unchanged and one improved (See Table 1). Of the twenty-four patients showing vascular insufficiency to the brain, nine were felt not to be candidates for operation. Of these, seven died and two remained unchanged. The remaining fifteen underwent surgery.

There are certainly a great number of variables which enter into the analysis of these patients—chiefly because the outcome of the natural course of the disease varies considerably. One would think that the sooner the patient is operated on, the better the results would be. Yet, from the Australian literature comes the report of a patient who had an endarterectomy and removal of an internal carotid artery thrombosis two years or so after the onset of his symptoms which were hemiparesis and hemihypesthesia. After the operation, the patient rapidly improved and now has complete use of his arm and leg, and normal sensation. Others feel that if the patient is not operated on within twenty-four hours, it is pointless to do any type of operation. I think that the truth lies somewhere between these two extremes; but as a generalization, the sooner the patient undergoes surgery, the better the results will be. In this series, the interval of time between the onset of the major symp-

TABLE 2 PATIENTS OPERATED ON FOR THE TREATMENT OF CEREBROVASCULAR DISEASE

PATIENT	AGE	BASIC PATHOLOGY	TYPE AND SITE OF VASCULAR OCCLUSION	NEUROLOGICAL DEFICIT	INTERVAL BETWEEN ONSET OF SYMPTOMS AND OPERATION	OPERATION	ATERIOGRAPHIC IMPROVEMENT	CLINICAL IMPROVEMENT
M.S.	36	Ascl.*	Thrombosis, middle cerebral artery	Hemiplegic Stuporous	5 days	Craniotomy Thrombectomy	Yes	Good
T.W.	40	R. H. D.*	Embolism, middle cerebral artery	Hemiplegic Stuporous	1 week	Craniotomy Embolectomy	No	Fair
E.S.	39	R. H. D.	Embolism, middle cerebral artery	Hemiparetic Hemihypesthetic Alert	2 days	Craniotomy Embolectomy	Yes	None
S.S.	59	Ascl.	Thrombosis, internal carotid artery	Hemiparetic Alert	5 hours	Endarterectomy	Yes	Fair
E.Q.	65	Ascl.	Thrombosis, carotid bifurcation	Hemiplegic Alert	1 day	Endarterectomy	Yes	Died
E.M.	62	Ascl.	Thrombosis, internal carotid artery	Hemiplegic Alert	12 hours	Endarterectomy	Yes	Fair
M.M.	58	Ascl.	Thrombosis, internal carotid artery	Hemiparetic Hemihypesthetic	1 week	Endarterectomy	No	None
R.K.	60	Ascl.	Thrombosis, internal carotid artery	Hemiplegic Hemihypesthetic Stuporous	2 days	Endarterectomy	No	Fair
L.D.	66	Ascl.	Thrombosis, carotid bifurcation	Hemiplegic Stuporous	8 hours	Endarterectomy	Yes	Good
L.D.	67	Ascl.	Thrombosis, internal carotid artery	Hemiplegic Hemihypesthetic Hemianopic	12 hours	Endarterectomy	No	Died
S.D.	59	Ascl.	Thrombosis, internal carotid artery	Hemiplegic	8 hours	Endarterectomy	Yes	Fair
M.N.	63	Ascl.	Thrombosis, carotid bifurcation	Hemiplegic	3 days	Endarterectomy	No	Fair
O.L.	68	Ascl.	Thrombosis, internal carotid artery	Hemiplegic Hemihypesthetic	2 days	Endarterectomy	Yes	None
E.B.	61	Ascl.	Thrombosis, carotid bifurcation	Hemiplegic	24 hours	Endarterectomy	Yes	Died
E.S.	60	Ascl.	Thrombosis, internal carotid artery	Hemiparetic Stuporous	18 hours	Endarterectomy	Yes	Good

toms and surgery ranges from five hours to five days. I certainly feel that occlusions of the carotid artery should be treated as soon as possible whereas the intracranial occlusions of the smaller branches of the carotid artery should be waited on to "stabilize."

I have used only four terms to classify the postoperative results. "Good," "fair," "none," "death." By *good* I mean that the improvement in the patient's neurological findings and subjective symptoms was apparent immediately after the operation—an improvement that was gross and unquestioned in both the minds of the patient and the physician. By *fair* I mean those patients who improved quite rapidly postoperatively, some almost completely, but who took one to two weeks to accomplish this improvement. I feel that these patients may have improved spontaneously and that possibly the operation was not actually responsible for the improvement. The classifications of *none* and *death* need no further clarification. Perhaps the patients who showed a fair improvement clinically but no improvement on their postoperative arteriograms are the patients who would have improved spontaneously. This would include two of the nine patients I have listed as showing postoperative improvement.

In none of the thirty-three patients who had an arteriogram was there any worsening of the patients' symptoms or neurological picture immediately after arteriography suggesting that the diagnostic study, itself, was dangerous. The endarterectomies of the carotid system were usually done as emergent procedures—especially the patients who had their symptoms less than forty-eight hours—but all craniotomies with removal of vascular occlusions of smaller vessels were done as elective cases, and with the aid of hypothermia. Though hypothermia may have been helpful in some of the patients having a carotid occlusion, I feel that in patients having complete occlusion, it does not make much difference in the outcome, and in many instances of partial occlusion, hypothermic techniques were not available to me.

Though I sometimes put the patients on anticoagulative therapy postoperatively, nothing takes the place of meticulous surgical techniques at the point of arterial suture in the prevention of postoperative thrombosis.

Arteriograms were done on all patients postoperatively, with ten of the fifteen operated patients having complete, or more complete filling of the arterial tree than seen preoperatively. In the remaining five, the arteriogram showed the same degree of occlusion postoperatively in three cases, and a greater degree of occlusion postoperatively in two cases. As will be noted in Table 2, arteriographic improvement is not invariably an indication that the patient is going to improve clinically. "Back-flow" however, was obtained in all cases in which there was postoperative arteriographic improvement.

The findings in this small series of cases confirms the impressions of Elkington that there is a higher incidence of carotid thrombosis in males as compared to females by a ratio of three to one. Similarly, there is a preponderance of thrombosis on the left as compared to the right side by a ratio of three to one.

Summary

When evaluating "stroke" patients the diagnosis of carotid artery occlusion should be considered.

An attempt should be made to substantiate this impression by carotid palpation (especially intra-oral palpation) and ophthalmodynometric readings. Ophthalmodynometric evaluation is not always available, but in those cases in which there is evidence of reduced retinal artery pressure unilaterally, vascular occlusion of the carotid system is invariably present. When these things have been done, arteriography should be done if indicated. I do not, however, feel that an arteriogram is indicated in every "stroke" patient; not because it might make the patient worse, but because

any diagnostic procedure done just for the sake of a "complete workup" without much thought as to its definite indication, is poor medical practice and cannot be condoned.

In appropriate instances showing arterial occlusion, an attempt should be made to surgically re-establish normal arterial supply to the brain.

Conclusions

1. The results of the operations on fifteen patients with occlusive vascular disease of the brain are presented. The improvement obtained in the patients in the series as a whole is not impressive, but in certain selected cases, operative intervention seems to have resulted in obvious improvement in both the clinical picture and arteriographic appearance of the patient.

2. It is often difficult to choose which patient would benefit from the removal of a vascular occlusion, and some patients who would seem to be good candidates for operation fail to improve, despite postoperative arteriographic improvement.

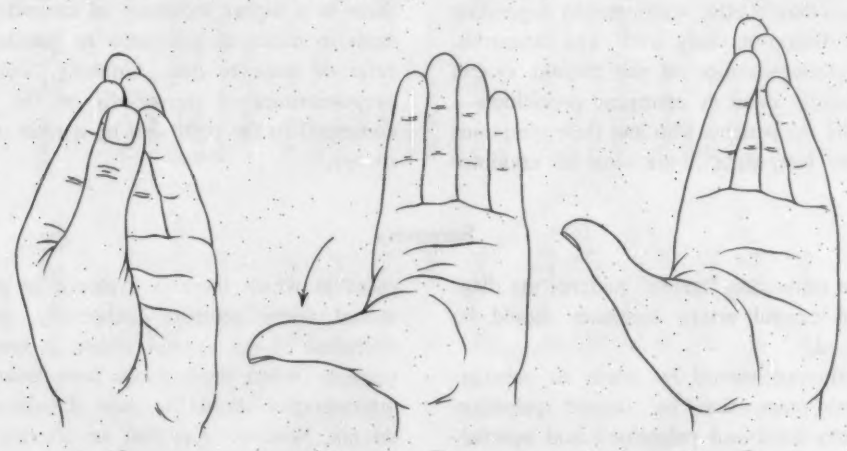
3. The possibility of there being occlusive vascular disease amenable to surgical intervention in patients having a clinical picture of a "stroke" should be kept in mind, and complete evaluation should be undertaken when indicated.

Lankenau Medical Building
City Line and Lancaster Avenues

CLINI-CLIPPING

A test for nerve injury. Ability to position the fingers and thumb as shown below indicates to the physician that the patient has:

A. Normal Median Nerve B. Normal Radial Nerve C. Normal Ulnar Nerve



The recognition and therapeutic follow-up of vaginitis and endocervicitis

EXFOLIATIVE CYTOLOGY

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The cytologic smear has value in the diagnosis, evaluation of severity, and the follow-up of various vaginal infections and in benign cervical disease. The following is a brief survey of the role of the smear in the four major vaginitides: trichomonal, candidal (monilial), bacterial and atrophic; and in endocervicitis.

Vaginal Infections

TRICHOMONAS VAGINALIS may reside in the vagina in the absence of symptoms and in the presence of lactobacilli. It may also produce a chronic vaginitis resistant to therapy. Vaginal biology is modified in that the pH rises and that microorganisms such as *E. coli* and *Streptococcus faecalis* are commonly found in association with the parasite.[1] Histologically, there is a nonspecific inflammation of the subepithelial connective tissue with capillary dilation and, in extreme cases, superficial epithelial ulceration.

The characteristics of the cytologic smear in the presence of trichomonal infections have been well detailed by Koss and Wolinska.[2] Finding the parasite in the cytologic smear (Figure 1) is specific, although many times, just a glance suggests the presence of the infection even when the parasite is not immediately identifiable. Trichomonads appear as bluish-green, spherical or elliptical bodies three to five times the size of a leukocyte; details of the structure of the trichomonad, except for a pale nucleus, are not usually noted.

In the average instance of trichomoniasis, there is an increase in leukocytes, mostly polymorphonuclear leukocytes, in the smear. Histiocytes are found. There is occasional clustering of the leukocytes around epithelial cells and the smear appears "dirty." Some superficial and intermediate cells demonstrate perinuclear halo formation. Eosinophilia of non-mature cells, nuclear atypia (rarely true dyskaryosis), degeneration, and cytolysis are also found. The atypism is usually, but not necessarily, confined to the superficial cell layers. Parabasal cells are increased in premenopausal women; these cells may also show nuclear enlarge-

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Presented at the Eighth Annual Meeting of the Inter-Society Cytology Council, Symposium on The Value of Exfoliative Cytology in the Diagnosis of Nonmalignant Conditions, Palmer House, Chicago, September 23-25, 1960.

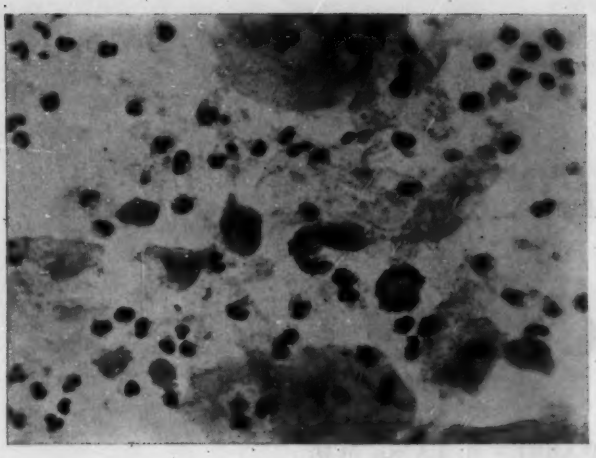


FIGURE 1

Cytologic smear of trichomonal infection. Many leukocytes are seen. The trichomonads appear as globular and irregular bodies in the center of the smear. Note the perinuclear halo formation in the two squamous cells at the bottom of the smear.

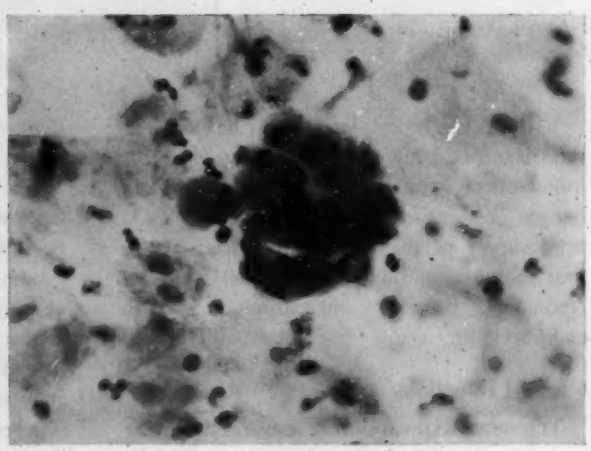


FIGURE 2

Cytologic smear of trichomonal infection showing minor atypia of glandular cervical ("endocervical") cells. Note pyknosis of some nuclei and increased thickness of nuclear rim of cell in lower right corner of the cluster. These cells were not found after treatment of the trichomoniasis.

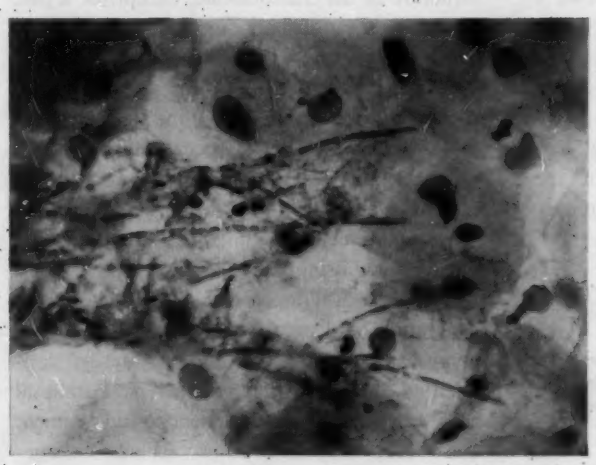


FIGURE 3

Cytologic smear of candidal (monilial) infection. Note the presence of branching hyphae. Only a few leukocytes are visible.

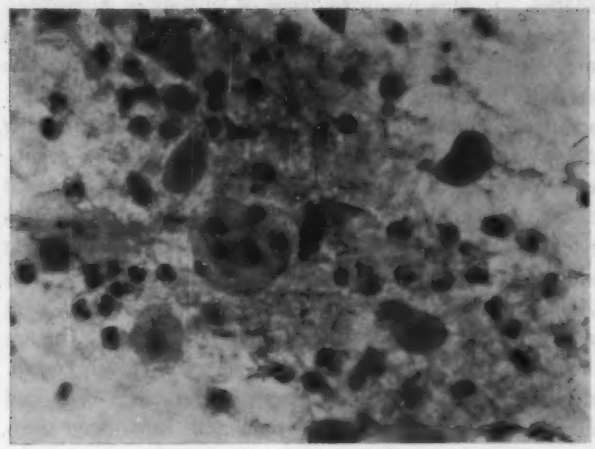


FIGURE 4

Cytologic smear of bacterial (nonspecific) vaginitis. Note the "dirty" appearance of the smear, the many leukocytes, the presence of deeper layer cells and the karyorrhexis of one cell toward the upper left corner.

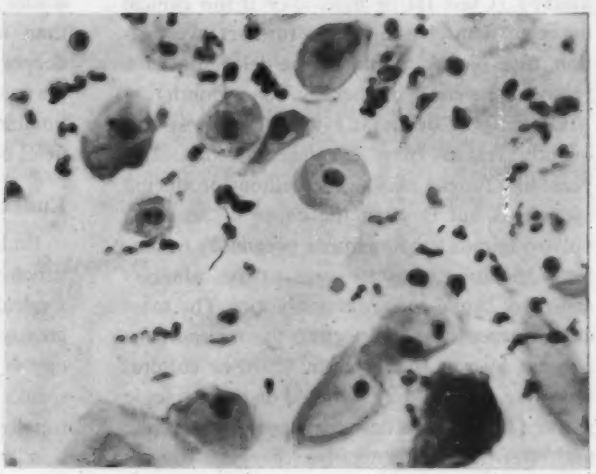


FIGURE 5

Cytologic smear of atrophic vaginitis. Note the predominance of parabasal cells and white cells.

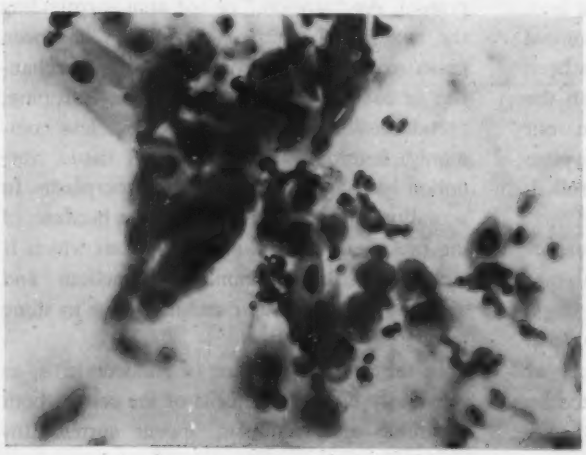


FIGURE 6

Cytologic smear of endocervicitis. This shows many pyknotic nuclei of deeper layer squamous cells. Note several cells with perinuclear halo formation. Biopsy showed "chronic cervicitis with severe epidermidalization."

ment, pyknosis and may assume bizarre shapes. The overall cytologic changes with trichomonal infection may lead the unwary in some instances to a false diagnosis of squamous cell carcinoma of the cervix.[3] The glandular cells of the cervix (so-called endocervical cells) occasionally show minor degrees of nuclear abnormality (Figure 2).

When confronted with an abnormal cytolgic smear demonstrating trichomonads, should the cervix be biopsied? In the presence of minor cytologic atypia and in the absence of suggestive clinical findings, it might be well to repeat the smear after the infection has been brought under control, and then decide on biopsy accordingly. If the atypia is more marked (Class III or more), or if the clinical findings themselves indicate further investigation, then biopsy should not be delayed after a reasonable period of therapy (one month).

CANDIDAL (MONILIAL) VAGINITIS most frequently results from *Candida albicans*. The yeast-like fungus may occur without producing symptoms but is often the cause of an acute vulvo-vaginitis accompanying pregnancy or diabetes mellitus, or subsequent to the administration of broad-spectrum antibiotics. The most efficient methods of detecting the microorganism are by wet smear, gram stain, or culture. However, hyphae may be noted on the cytologic smear (Figure 3). These tend to be eosinophilic and often show degenerative changes. The infection, even when pronounced, is found in the presence of normal vaginal pH and flora and, unless there is an accompanying trichomonal vaginitis, white cells are infrequent. It has been said that cytologic atypia may occur with the infection,[4] but this has been rare in our experience. As would be expected, the hyphae slowly disappear as the infection is controlled.

BACTERIAL VAGINITIS, sometimes called nonspecific vaginitis, is uncommon in premenopausal women. It may be caused by a mixture of microorganisms but more frequently a single microorganism such as *E. coli, Hemophilus vaginalis*,[5] or a variety of staphylococci or streptococci, among others, may be isolated by culture. The cytologic smear (Figure 4) discloses an abundance of leukocytes, histiocytes, and at times slight nuclear atypism. Bacteria may be seen. The smear is often dirty. The smear reverts to normal with specific therapy.

With estrogen deficiency accompanying aging, following surgical, or radiation castration, or as a result of exogenous, or increased endogenous testosterone, the vagina becomes atrophic. An ATROPHIC VAGINITIS occurs when inflammatory changes are superimposed. Histologically, the vaginal epithelium is thin with evidences of submucosal inflammation. The appearance of the cytologic smear is well known. There is an increase of parabasal cells and leukocytes. The parabasal cells may show eosinophilic staining of the cytoplasm and the nuclei may occasionally appear more active than usual. With subsidence of the process, deeper layer cells regain their basophilic cytoplasmic staining and the leukocytes decrease in number. If estrogen is used for therapy, superficial eosinophilic cells appear in abundance.

Endocervicitis

Endocervicitis is a vague, controversial term which literally means inflammation of the anatomical endocervix. When used to indicate grossly evident cervical changes, the terminology is just as vague. But, when the clinician speaks of "endocervicitis," or "cervicitis," he usually means that a so-called cervical "erosion" is visible on the portio, with the assumption that a low grade infectious process is also present. An "erosion," or red area surrounding the anatomical external cervical os has been given many names, (some indicating mechanism or causation) such as eversion, ectropion, pseudoerosion, diseased cervix and, less commonly, heteroplastic endocervical tissue, vermilion halo and mucoepithelial hyperplasia. In actuality, the cervix is red mainly because of the presence of glandular epithelium which is less dense than squamous epithelium and thus allows the vascular stromal tissue to shine through.[6]

In the average instance of endocervicitis, as previously defined, the cells of the cervix, both squamous and glandular, appear normal. In-

fections of various types and epidermidalization are the two major factors affecting the smear in endocervicitis. The former process is well known as causative of cytologic atypia. The latter signifies the spread of squamous epithelium toward the cervical os and, since it is a growth process, may exfoliate abnormal cells, especially abnormal squamous cells. As would be expected, concomitant lesions such as trichomonal infections, dysplasia, leukoplakia, preinvasive or invasive carcinoma may also modify the smear pattern.

Cytologically, inflammatory cells including histiocytes may be seen. Erythrocytes are occasionally present. Various types of aberrant, even bizarre cell forms may be noted. These are usually squamous, less frequently glandular cells. Parabasal and glandular cells may become elongated and may show vacuolization. Intermediate and deeper layer squamous cells may demonstrate active appearing nuclei and eosinophilic cytoplasm. Cell clusters are occasionally seen. Mucus may be prominent.

When should a cervix with endocervicitis be biopsied? In general, tissue should be obtained whenever the cilnical, or cytologic findings or both suggest the necessity. The type of biopsy we prefer is a coning biopsy with removal of as much endocervix as feasible. Multiple sections are desirable. The most significant differential diagnosis is naturally, carcinoma. Accessory methods of evaluation such as Schiller iodine staining and colposcopy are also helpful when available.

Conclusion

The cytologic smear is a supplementary method in the diagnosis and follow-up of various forms of vaginitis. It is a specific method of diagnosis, especially for trichomonal and candidal infection. It is not specific as a diagnostic measure of endocervicitis but serves as a screening method for more serious lesions which may be present on the cervix.

References

1. Lang, W. R., Fritz, M. A. and Menduke, H.: Bacterial and Mycotic Components of Trichomonas vaginalis Vaginitis, Gynaecologia, 149 (Suppl.):55-62, 1960.
2. Koss, L. G. and Wolinska, W. H.: Trichomonas vaginalis Cervicitis and Its Relationship to Cervical Cancer. A Histocytological Study, Cancer, 12:1171-1193, (November-December) 1959.
3. Bechtold, E. and Reicher, N. B.: Relationship of Trichomonas Infestations to False Diagnoses of Squamous Carcinoma of Cervix, Cancer 5:442-457 (May), 1952.
4. Papanicolaou, G. N.: Atlas of Exfoliative Cytology, Cambridge, Published for The Commonwealth Fund by Harvard University Press, 1954.
5. Gardner, H. L. and Dukes, C. D., Hemophilus vaginalis Vaginitis, Ann. of The New York Academy of Sciences, 83:280-289, 1959.
6. Lang, W. R.: Benign Cervical Erosion in Nonpregnant Women of Childbearing Age. A Colposcopic Study, Am. J. Obst. and Gynec. 74:993-999 (November) 1957.

1012 Walnut Street

MEDICAL TEASERS

A challenging crossword puzzle for the physician.

SEE PAGE 44a

SPRAINS...METATARSALGIA...

Sprains

When a joint is forcibly moved beyond its normal range of motion a strain is made upon the ligaments. If the force continues, the ligament does not tear, or lose, its continuity but becomes detached from the bone. This is the pathology of a simple sprain. If the acting force is sudden and extreme, the ligament may pull lose a fragment of bone, producing a "fracture sprain."

At the site of the lesion, there may be some hemorrhage and infiltration of the soft parts with serum and lymph together with an inflammatory reaction. Thus is created the typical picture of a sprain—point tenderness, pain, swelling, limitation of motion and later ecchymosis.

It is essential that the type of treatment used gives an early and rapid healing of the site of the lesion. The prognosis is good if this early healing is accomplished. However, if recovery is delayed, and repeated strain made upon the ligament, a chronic inflammatory condition develops and the prognosis is poor. The joint will then remain swollen, painful, unstable and recurrences likely.

With this stated pathology of a sprain, the treatment is conservative and is directed to an early healing of the lesion.

The most orthodox treatment is immobilization of the ankle by means of a plaster of Paris splint. Adhesive strapping is also a popular dressing. However, most methods of strapping are ineffective as they do not immobilize the joint. This is especially true of the figure-of-eight type of strapping as the adhesive which extends over a short distance down the joint will stretch, slip on the skin and also because the skin itself is not fixed. Use a two-inch adhesive, beginning on the inner side of the foot (in sprains of the external ligament), carry it under the foot and up the outerside of the leg to the knee. Hold the foot in full aversion and pull the outside strap tight. A figure-of-eight strapping at the foot and ankle level will hold the adhesive to the skin and give added stability. Strapping is maintained for two weeks and renewed as often as necessary.

Injection of the sprain lesion with one to two centimeters of procaine has given excellent results with complete healing and a short period of disability and convalescence. The fluid should be carried down to the bone and beneath the ligament lesion. Weight bearing is avoided for a period of one to two days either by use of crutches or bed rest. Cold compresses (ice bag) may be applied over tender area. Injection can be repeated two or three times at daily intervals. Weight bearing can be

FLAT FOOT

E. BISHOP MUMFORD, M.D., Indianapolis, Indiana

resumed at any time. Our results with this type of treatment have been most satisfactory and the use of procaine is routine.

The reason for the use of procaine in sprains may not be convincingly stated. It may be that pain causes swelling and swelling produces a deterrent in the process of healing. However, experience shows that this empirical form of treatment gives satisfactory results.

Sprains of the knee, hip, shoulder, elbow are uncommon and, before a definite diagnosis in these joints is made, a careful x-ray examination should be made to rule out any bone lesion. To eliminate a fracture of the carpal navicular bone, special technique is required in taking the x-ray to have a full exposure of the navicular. Focus the tube over the first interphalangeal joint and then turn the tube in direction of the wrist. This exposure will give an elongated view of the navicular bone. Examine carefully for a transverse fracture line which may be very fine.

Metatarsalgia

One of the common foot ailments is that of pain beneath the head of one or more of the tarsal bones. The anterior arch formed by the metatarsals is normally flexible, the weight being carried first beneath the first and fifth metatarsalgies as the foot is flexed in walking, the anterior arch acting as a spring. However, in certain faulty weight bearing, especially that of valgus or flat foot, the anterior arch becomes more or less fixed, the toes become dorsally flexed and there occurs a subluxation in the metatarsophalangeal joint. The arch becomes reversed and the weight is carried on the heads of the metatarsals. This abnormal weight bearing results in the formation of a callosity beneath the metatarsal bones. This callosity may develop in its center a corn, or even an ulcer. The pain in the callosity may be complicated by a pinching of the sensory branch of the plantar nerve, usually between the fourth and fifth metatarsals, which pain is very severe and may cause total disability in walking.

In as much as the condition is one of abnormal pressure on the head of the metatarsal, the plan of any treatment is to relieve this pressure. A simple form of relief of this pressure is obtained by placing a soft rubber pad just proximal to the callosity, or through the use of a transverse bar on the sole of the sole, so that the foot rocks on this bar and weight bearing is carried beyond the callosity.

If a corn or an ulcer develops, the corn or ulcer should be excised through a plantar approach and the head of the offending metatar-

sal or metatarsals removed through a dorsal approach. *Do not remove* the head of the first, second, or fifth metatarsal bone. Any scar on the bottom of the foot will be in a cleft and not under pressure on weight bearing.

It is useless to attempt to remove the corn through application of a pad, paste or acid, which may only produce more reaction of an inflammatory type. Such treatment does not remove the cause of the callosity, or of the ulcer, nor the pain.

Flat Foot

Flat foot (pes valgus) is a common condition found in all groups of age and may create all degrees of disability, or even total impairment. The outstanding symptom is pain in the foot upon weight bearing, either when standing, or when walking; a pain created by a strain upon the ligaments on the inner side of the foot.

If the pain is caused by faulty weight bearing through the valgus, or turned out position of the foot, and not to any organic or structural change in the bones, then the correction of this condition is to put the foot in a position of internal rotation, one of a varus position for weight bearing.

There are three types of flat foot, flacid, spastic and rigid. In order to be able to change the weight bearing position, the foot *must be flaccid*. If the foot is spastic through pain maintain full fixation without weight bearing through adhesive strapping, or plaster of Paris, or simple bed rest. It is useless to attempt to use any method in shoe alteration, or foot plates. It is essential that all pain in the spastic foot be eliminated and the foot can be inverted without pain or muscle spasm. If the foot is rigid, a radical surgical procedure of osteotomy (wedge type) is required.

If the foot is flaccid and easily turned into a varus position, this position can be maintained, both in standing and in walking, through a one-quarter-inch lift on the inner border of the sole of the shoe and a lift of one-eighth of an inch on the inner border of the heel. (The cobbler calls this correction a "Dutchman.")

Flat feet are seen frequently in infancy and early life and the corrective shoe should be worn for two to three years.

If in a flaccid foot the varus position cannot be maintained after a long period of use of a corrective shoe, the correct weight bearing position may be obtained through plication of the internal (deltoid) ligament. This is a major surgical procedure.

One might question the effective use of the foot plate, either metal or heavy leather. Such a devise will give some support to the inner side of the foot, (the long ligament) on standing, but mechanically cannot be of service in taking a step, for as soon as the heel is lifted from the ground, it cannot give support to the inner border of the foot. It may be so uncomfortable that one is compelled to walk with the weight on the outer border of the foot.

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Read the stories doctors write of their unusual experience as coroners and medical examiners. SEE PAGE 38a

The healthy sequence of the "girl-boy relationship in adolescence has significant meaning for the solidarity of marriage. Current culture is in flux and constantly modifies social relationships but has nevertheless left some basic social needs unfulfilled.

Courtship and Conception

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Investigations of emotional troubles have in recent years been engaging the efforts of sociologists, who naturally contribute to sociological journals. In these sources, valuable material in the narrowing border-zone between two disciplines does not come to the attention of medical men as it should, whether they be internists, surgeons, obstetricians, or any who are aware of the frequent relationship of somatic symptoms to emotional stresses. Hence, the present contribution of new material, with some relevant references to sociological sources not readily accessible in medical libraries.

Parental Anxiety

For example, many women came into our Mental Hygiene Clinic (now closed), or now to the Family Service Agency, with a presenting complaint of anxiety about the dating habits of their teenage daughters. One hears community rumors as to the extent of sexual play among high school seniors, as to unwanted pregnancies in brides of sixteen, or less, in engaged girls, and even in those who have no immediate intent of matrimony. Yet disapproval, horror, evasion, frustration, are the main responses to inquiries of parents, principals, or members of a board of education, or to suggestions of the desirability of seminars for twelfth-graders in the privacy of small groups, by trusted special guidance personnel, and exempt from cramping visitations by relatives and administrators. There is a pressing need for convincing evidence, in order to progress in the face of objections occasionally raised by some parents who fear to face the truth. Most young people seriously need, and in fact ask for, guidance for their budding emotions.

Interval from Marriage to First Child

In a prior paper, a distribution table of the intervals from marriage of girls under twenty-one, to the birth of the first child of record, demonstrated the high proportion of premarital conceptions in this county. For instance, if one chooses the interval of eight months (224 days) the rate was forty-three percent. More precise assessment of this percentage is possible by assuming conception to have occurred, not a few days after marriage—as in the prior paper—but at, or shortly after, the first day of the latest menstrual period (LMP). Pursuant to this assumption, the interval between marriage and conception, for which no data have been found in the literature, has been computed and will be presented below. The reliability of the LMP data as stated by the mother will be deferred to another paper.

TABLE I INTERVAL BETWEEN CONCEPTION AND MARRIAGE
(In Lunar Months of 28 Days)

PREMARITAL		POSTMARITAL	
12 but less than 13	2	0 and less than 1	36
		1-2	32
11-12	1	2-3	29
		3-4	22
10-11	1	4	16
		5	9
9-10	1	6	8
		7	7
8- 9	1	8	8
		9	4
7- 8	3	10	4
		11	2
6- 7	2	12	5
		13	2
5- 6	7	14	1
		15	3
4- 5	13	16	2
		17	1
3- 4	34	18	1
		19	2
2- 3	36	20	1
		21	0
1- 2	39	22	0
		23	0
Less than 1	32	24	2
	172		197

Interval Between Conception and Marriage

We may now present the new data as more precise measures of the frequency of pregnancy-at-marriage. The first day of the last menstrual period as recorded on the birth certificate (LMP) was taken as the best estimate of the date of conception. The interval from that date to the date of marriage was calculated in lunar months, and this value is used here as the desired interval between marriage and conception. The interval varied from three-hundred and fifty-eight days *before* marriage to six hundred and ninety-seven days after marriage. There were three hundred and sixty-nine births, which are tallied by months in Table 1.

PREMARITAL CONCEPTIONS. There were one hundred and seventy-two of them. The mode or commonest frequency, thirty-nine fell in the class less than two but more than one month before marriage. The mean was 2.8 lunar months before marriage, with a standard deviation of 2.2 months, Put another way, 172/369 or *forty-seven percent* of the conceptions were premarital. This percentage is a bit greater but more reliable than the figures in my prior paper.

MARITAL CONCEPTIONS. Of these there were one hundred and ninety-seven. In general, among the one hundred and ninety-seven births in wedlock those conceptions occurring within four months numbered one hundred and nineteen or sixty percent. Such prompt pregnancies, especially because so many young couples are today dependent on their parents, and even to the extent of living in the same house, are held by many to be undesirable. The modal month was the first, the mean was 4.8 months and the standard deviation 4.9 months. Put another way, there 197/369 or fifty-three percent of all the conceptions were in wedlock.

TABLE 2 PREMARITAL CONCEPTIONS AND AGE OF MOTHER

Age (last)	14	15	16	17	18	19	20	Total
Births all intervals								
No.	4	12	51	87	113	85	62	414
% of 414	1	3	12	21	27	21	15	100
Under 196 days (7 mos.)								
No.	2	9	15	14	15	12	4	71
% of 71	3	13	21	20	21	17	6	100

Relation of Premarital Conceptions to Age of Mother

This is shown in Table 2. The ages of mothers are in first row, then the births, in absolute numbers in the second row and in percentage of the total four hundred and fourteen in the third row. If we take only births under seven months, absolute numbers are in the fourth row, with percentages in the final row. When now we add across the third row for all births, we get sixteen percent to mothers under seventeen, whereas in the last row for births under seven months, we get thirty-six percent. In other words, the frequency of premarital conceptions is markedly greater among girls marrying before their seventeenth birthday.

Conclusions

The evidence examined consisted of consecutive marriage certificates filed with the Recorder of a county in California having a population of something over one hundred thousand, half urban and half rural. In the twenty-six-month period, sampled from June 1, 1956 to July 31, 1958, there were two thousand two hundred and seventy-four brides of all ages, of which those under twenty-one at marriage were nine hundred and seven, or forty percent. In the process of seeking children born to the latter, the birth certificates were examined, from December 1, 1956 in order to catch those born unduly early, and through July 31, 1959, in order to include those born within twelve months after marriage. There were three hundred and sixty-nine born to women under twenty-one at marriage. A punctilious reader may query the apparent discrepancy of three hundred and sixty-nine from certain totals in a prior paper, e.g., Table 6 there, which gives four hundred and fourteen; the figures are correct, having been derived from mechanical sorts of the IBM punch-cards. Reconciliation will not be gone into, beyond remarking that the birth certificates give the age of mother at birth of the child was twenty-one or less, whereas we need the age of mother at marriage, which is unknown and could only be assumed to have been approximately one year less, i.e., under twenty-one. Re-examination of the one hundred and thirty-nine shows a natural division into two parts.

Summary

Conceptions before marriage were found to be one hundred and seventy-two babies, or forty-seven *percent of our chosen sample under twenty-one years; the intervals ran as high as three hundred and fifty-eight days early, and averaged 2.8 lunar months. Conceptions after marriage numbered one hundred and ninety-seven, at an interval averaging 4.9 lunar months. Finally, comparison between birth-frequencies in relation to age in our total sample and the premaritals, makes clear that the latter were markedly more frequent among girls marrying before the seventeenth birthday than those marrying later.*

References

For those physicians who wish to pursue the rather startling newer literature, which is almost entirely scattered in sources other than medical journals, the following have value:

1. Auerback, A.: Understanding the Meaning of Psychiatric Emergencies, Jour. Am. Med. Assn. 170 (9):1024. June 27, 1959.

2. Barsy, Thelma: Teenagers shouldn't go steady, Family Weekly, in Santa Barbara News-Press, Sunday, January 26, 1958.

3. Codes of Conduct, High School Movement, 5th Conference, at Mandel Hall, University of Chicago, March 16, 1957. Obtainable for $1 from D. O. Taylor, executive Director, 441 N. Michigan Avenue, Chicago 11, Illinois.

4. Davis, K.: professor of sociology at University of California, in What's New, Contemporary Comment No. 4, published by Abbott Laboratories, Chicago, Fall, 1958.

5. Ehrmann, Winston: Premarital Dating Behaviour, Holt, New York, 316 pp., 1959.

6. Goode, W. J.: After Divorce, Free Press, Glencoe, Illinois, 381 pp., 1956, esp. p. 335.

7. Gray, H.: Marriage and Premarital Conception, Jour. Psychology, 50:383-397, October 1960. That paper includes fifty items seen before the present list.

8. Guttmacher, A. F.: Babies by Choice or Chance, Doubleday, New York, 289 pp., 1959.

9. Gebhard, P. H., Pomeroy, W. B., Martin, C. E., and Christensen, C. V.: Kinsey Institute for Sex Research at Indiana University, Monograph on Pregnancy, Birth and Abortion, New York: Harper, 282 pp., 1958, especially Table 15, P. 67.

10. Hart, Robin M.: I am a Teenage Divorcee, Parade Magazine, Oct. 5, 1958, and reprinted by the Family Service Assn. of America, 215 Fourth Avenue, New York 3, New York.

11. LeMasters, E. E.: Modern Courtship and Marriage, New York: Macmillan, 619 pp., 1957.

12. Lindsey, Judge Ben: The Revolt of Modern Youth, New York: Boni and Liveright, 1925. especially pp. 56, 64, 65.

13. Mead, Margaret: A New Look at Early Marriages, U. S. News and World Report, 48, No. 23, 80-86, June 6, 1960.

14. Morgan, T. B.: How American Teenagers Live, Look Magazine, July 23, 1957, Vol. 21, No. 15, p. 21.

15. Peale, Norman V.: Answers your Questions, Look Magazine, June 12, 1956, Vol. 20, P. 50.

16. Reiss, I. L.: Premarital Sexual Standards in America, Free Press, Glencoe, Illinois, 286 pp., 1960.

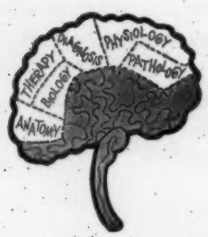
17. Scott, Marian M.: At graduation everybody stays out all night long, Good Housekeeping, June 1956, 142, No. 6, p. 62.

18. Schauffler, G. G., M.D.: Today it could be your daughter, Ladies Home Journal, Dec. 1957, Vol. 75, p. 43.

19. Wetherill, G. G.: San Diego Sex Education program, read at the 3rd general session, Am. School Health Assoc., October 31, 1960, mimeo 7 pp.

20. Winch, R. F.: Mate-selection, a study of Complementary Needs, New York: Harpers, 349 pp., 1958.

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Cancer of the Stomach

Carcinoma of the stomach continues to present itself as one of the most distressing forms of malignancy. Although recognized as a definite entity for many decades, early diagnosis remains most difficult and the long-term results of surgical therapy have shown very little improvement.

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While some thirty thousand to forty thousand persons die from cancer of the stomach in the United States each year, there has been a slight decrease in the incidence of this disease in this country and throughout the world in the past twenty-five years.

Gastric carcinoma is seen four to five times more frequently in the Japanese people than in the Caucasian population of the United States. It is noteworthy that among the Japanese the highest incidence occurs a decade earlier than in the white population of this country.[1] Both Finland and Iceland report that gastric carcinoma in these countries is seen as frequently as is reported in the Japanese people. In the USSR, cancer of the stomach is said to be responsible for thirty percent of all malignant growths.[2]

This study was undertaken to review critically our personal experience in the management of carcinoma of the stomach over a twenty-year period in our private practice. Between the years 1939 and 1959, eighty-six patients who had cancer of the stomach came to surgery and in each instance the microscopic diagnosis of carcinoma was substantiated. These eighty-six patients, representing a cross-section of the Midwestern population both urban and rural, form the basis of this report. In addition, there were two cases of gastric lymphosarcoma treated by resection and radiation therapy during this period but these were not included in this review.

Age and Sex Distribution

Gastric carcinoma is said to occur twice as often in men as in women. In our series there were fifty-one men (67.5%) and thirty-five women (32.5%). The age range of these patients was between twenty-nine and eighty-six years (Table 1). Interestingly enough, the youngest and oldest patients in the series were women. Only eight patients in the entire group were under fifty-years-of-age. The largest number of patients were seen in the sixth decade, 41.6% of the entire number being seen in this ten-year period. It is noteworthy that, although gastric carcinoma may be found in younger

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TABLE 1 AGE DISTRIBUTION IN CARCINOMA OF STOMACH

AGE	FEMALE	MALE	TOTAL
25 - 30	1	0	1
31 - 40	1	2	3
41 - 50	1	3	4
51 - 60	9	6	15
61 - 70	16	21	37
71 - 80	5	17	22
81 - 90	2	2	4
Total	35	51	86

patients, it is essentially a disease of older people.

Symptoms

Carcinoma of the stomach is usually insidious in onset and neither the patient nor the physician may be impressed with the significance of the early symptoms. Because the early symptoms are so very vague, there is often a delay of several months before the individual consults his physician. Wangensteen states that the presence of symptoms suggests the lesion has been present for twenty months. If, therefore, there is a delay of four to six months before coming to operation, the gastric cancer will be of two years' duration before therapy is undertaken.[3]

In this group of patients referred to us for surgical therapy, pain was the most common presenting complaint (Table 2). The pain in most instances was of a vague type and was described as dyspepsia or as epigastric discomfort. Many of these patients had ulcer-like symptoms on admission. Four had x-ray evidence of duodenal ulcer. Two of these had been operated upon previously for a benign duodenal ulcer. One patient had a perforated duodenal ulcer one year previously and a second had been treated with a gastroenterostomy for ulcer seventeen years before his admission with gastric cancer.

Only one of the four patients who had a duodenal ulcer was partially obstructed. However, it has been pointed out by Brown that medical therapy of gastric obstruction necessitates an accurate differential diagnosis between benign duodenal ulcer and pyloric carcinoma.[4] He advocates a second x-ray examination ten to fourteen days after initial therapy which will usually reveal the cause. Patients who have obstruction due to duodenal ulcer usually respond to medical therapy and with subsiding edema the pylorus tends to open. A lack of response to medical treatment within fourteen days, as determined by either x-ray examination, or by nightly aspirations with a large Ewald tube, suggest pyloric carcinoma. Brown reports two patients, one with a history of ulcer for five years and another with a history of ulcer for forty years. In both instances, the history was strongly suggestive that duodenal ulcer was the cause of the pyloric obstruction. Each patient was subsequently demonstrated to have a pyloric carcinoma.

Walters observed that one-third of his patients operated upon for cancer of the stomach had a history which simulated benign peptic ulcer.[5] In our series, twenty-five patients (29%) presented with such symptoms and had been treated on an ulcer regime before coming to operation.

The hazard of mistaking an early gastric carcinoma for a benign gastric ulcer is not fully appreciated by all physicians. Ochsner believes that no gastric ulcer should be treated conservatively and that all should be excised.[6] It is our practice to recommend surgical treatment of all gastric ulcers which do not heal by x-ray and gastroscopic examination in three weeks' time, and those who show this healing are re-examined again in three months to confirm the satisfactory result.

Weight loss was the second most common complaint in the series (Table 2). The loss of weight ranged from eight to fifty pounds, the average loss being twenty-three pounds. This striking loss in weight with gastric carcinoma is attributed to a decreased ability of the liver to convert glucose to glycogen. Also patients with gastric cancer do not regenerate plasma proteins well, because of a defect in the mechanism of protein metabolism, or because of an abnormal distribution of plasma proteins.[7]

Other common complaints noted in the order of their frequency were vomiting, nausea and anorexia. Thirty-six percent of our series had pyloric obstruction, either complete or partial, on admission to the hospital. Extension of the gastric tumor had produced an obstruction of the small and large bowel in two cases (Table 3). Four patients were admitted with hematemesis and three had gross melena. Only one patient was admitted with jaundice and two were asymptomatic except for anemia and weakness.

Rigler has reported a group of patients with gastric carcinoma who were entirely without symptoms or clinical manifestations but had positive x-ray findings.[8] At operation, none of this group were resectable due to extensive metastasis. We observed two such patients in our series, both of whom were resectable and a subtotal gastrectomy was possible in each instance.

Anemia

Detailed blood studies were available for review in seventy-five of the eighty-six patients in this series (Table 4). Forty-four patients (51%) of the group had less than twelve grams of hemoglobin but only nine percent were admitted with less than eight grams of hemoglobin. Marked anemia is not a constant finding in gastric cancer. Flood observes that massive hemorrhage is infrequent in this disease and this is in keeping with our experience.[9]

Two patients in this series had proven pernicious anemia. It is well recognized that there is an increased incidence of gastric carcinoma in patients with pernicious anemia. This increased incidence is considered to be resultant from a mucosal abnormality or mucosal injury. Wangensteen observes that the mucosal atrophy in patients with pernicious anemia is usually observed prior to the appearance of the neoplasm.[3] The increased life expectance of individuals with pernicious anemia since the advent of modern therapy may explain the apparent increase in gastric cancer in these patients. It is to be recommended that patients with pernicious anemia be followed with per-

TABLE 2 PRESENTING SYMPTOMS IN CARCINOMA OF STOMACH

	CASES	PERCENT
Pain	57	66
Weight Loss	31	36
Vomiting	23	26
Nausea	20	23
Anorexia	10	11
Hematemesis	4	4
Melena	3	3
Asymptomatic	2	2
Jaundice	1	1

TABLE 3 OBSTRUCTION AS A SYMPTOM IN CARCINOMA OF STOMACH

TYPE	NO. OF CASES	PERCENT
Pyloric Obstruction Present	31	36
No Pyloric Obstruction	48	56
Large Bowel Obstruction	1	1
Small Bowel Obstruction	1	1
Unknown	5	6

TABLE 4 ANEMIA IN CARCINOMA OF STOMACH

HEMOGLOBIN	PATIENTS	PERCENT
Less than 8 gm.	8	9
8.1 - 10	19	22
10.1 - 12	17	19
12.1 - 14	24	28
14.1 gm. or more	7	8
Inadequate Record	11	12
Total	86	

TABLE 5 OPERATIVE PROCEDURE ELECTED IN CARCINOMA OF STOMACH

OPERATION	NUMBER	PERCENT
Total Gastrectomy	10	11
Subtotal Gastrectomy	43	50
Gastroenterostomy	8	9
Biopsy Only	18	21
Miscellaneous	7	8
Total:	86	

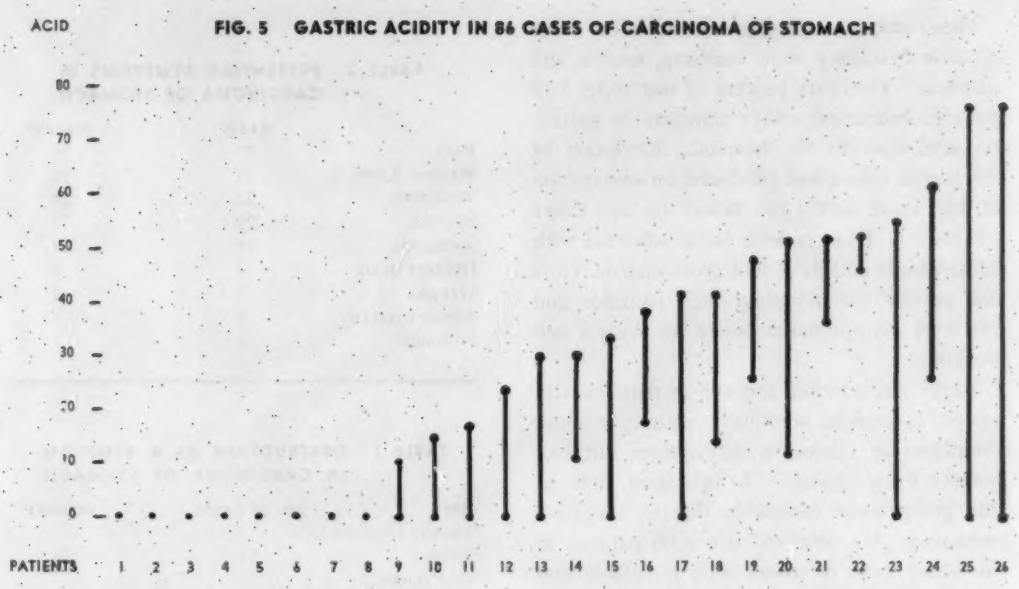


FIG. 5 GASTRIC ACIDITY IN 86 CASES OF CARCINOMA OF STOMACH

iodic gastric x-ray studies because of this predisposition to the development of gastric carcinoma.

Gastric Acidity

There is an apparent relationship between achlorhydria and the development of gastric carcinoma. Achlorhydria is found in fifty to ninety percent of all patients with carcinoma of the stomach. Walters states that, if an achlorhydria be present, the gastric lesion is practically always malignant.[5]

A long-term study of the gastric acidity in a group of patients who subsequently developed gastric carcinoma was done by Comfort and Kelsey.[10] They found a subnormal amount of gastric acidity during all interval years before the cancer was recognized. They noted that, in their series, prior to the development of gastric carcinoma, an achlorhydria developed in the fourth decade rather than in the sixth decade as is noted in normal individuals. They concluded that the defect in the gastric mucosa responsible for the achlorhydria reaches its peak incidence earlier in the precancerous than in the normal patient.

Gastric acidity studies were available for review in twenty-six patients in our series (See Chart). There were eight without free or total acid. Fourteen had a free acid of under twenty degrees. The four remaining patients had free acid over twenty degrees. Eighteen had a total acidity ranging from ten to seventy-five degrees. It is apparent that these readings are lower than that which would be associated with benign disease in a similar age group.

Operations and Results

All eighty-six patients included in this series were explored (Table 5). Fifty-three (61%) of the carcinomas were found to be resectable. A subtotal gastrectomy was the procedure of choice in forty-three patients (53%) in the series. The amount of stomach removed varied from sixty to ninety percent. Ten (11%) total gastrectomies (eleven percent of the series) were performed for carcinoma of the cardia, diffuse gastric carcinoma, and multiple polyposis with carcinoma.

In eight patients, gastroenterostomy was the procedure of choice as resection was impossible. There were eighteen operations in which only a biopsy was done. The remaining patients had operations which relieved bowel

TABLE 6 OPERATION—SURVIVAL IN CARCINOMA OF STOMACH

	LESS THAN 2 WKS.	LESS THAN 6 MOS.	6 MOS. TO 1 YR.	1-2 YRS.	2-3 YRS.	3-4 YRS.	4-7 YRS.	7-10 YRS.
Total Gastrectomy	1	2	2	3	1	0	0	1
Partial Gastrectomy	2	6	21	5	5	2	1	1
Gastroenterostomy	1	2	2	1	3	0	0	0
Biopsy	5	5	4	4	0	0	0	0
Miscellaneous	0	4	2	0	0	0	1	0
Total Cases	9	19	26	13	9	2	2	2
Percent	10	22	30	15	10	2	2	2

obstructions, common duct obstructions or a palliative feeding gastrostomy.

A follow-up in such a series of referred patients over a twenty-year period is difficult to complete. However, we were able to trace accurately seventy-five of the eighty-six patients in this series. Those patients which could not be traced were considered dead within one year after operation. Many of the patients whom we presumed dead could not be traced because either the physician or nearest relative, or both, had either moved, or was deceased.

Nine patients died within two weeks of operation and of these five had only a biopsy (Table 6). Seventy-two percent of the patients were dead within the first year. Two of the patients lived nine and one-half years and are still living in health. One had a total gastrectomy and the other had a partial gastrectomy. Two others had partial gastrectomies and are living two and four years. One man lived six years with only a palliative gastrostomy.

There are varying survival rates for carcinoma of the stomach reported in the literature. Wangensteen reported a five to eight percent survival in 1951.[3] Flood, in 1958, found a five year survival ranging from five to ten percent of all patients admitted to the hospital for carcinoma.[9] Lipp and Phillips, in 1960, analyzed eighteen reported series from all parts of the country, and found an absolute survival rate of seven percent.[11]

The five-year survival figure in this series is discouraging. As noted, it was possible to do a resection in only sixty-one percent of the series. In the remainder the lesion was too far advanced to permit anything but a biopsy or a bypass procedure.

Discussion

Such a review of one's personal experience with a group of referred private patients would seem to suggest that in too many instances the diagnosis was made at too late a date. This is a ready explanation for a dismal picture but it is not quite this simple.

Vague abdominal distress or dyspepsia is an extremely common complaint in our American scene. While gastric examination by a competent radiologist remains our most valuable, single diagnostic measure to date, mass surveys have not been too productive in picking up early cases of gastric carcinoma.[11, 12]

At the present time, the most valuable single method of arriving at a correct early diagnosis is for the physician to develop a very high index of suspicion. Persistent dyspepsia, especially if associated with anorexia and loss of weight, merits a very exhaustive study of that individual. In the light of our present knowledge, there will still remain that group of cases with minimal or almost absent symptoms, who, on routine examination, will be found to harbor an advanced gastric malignancy for which definitive surgery is impossible.

Summary

A series of eighty-six patients with carcinoma of the stomach has been presented. The age range was between twenty-nine and eighty-six years with an average of sixty-four years. The absence of an anemia was a frequent occurrence with this disease. Low gastric acids were frequently found.

Pain was the most common symptom in this group of patients with weight loss the next most common finding. Anorexia and nausea and vomiting were frequently observed while hematemesis and gross melena were not common findings. Carcinoma of the stomach was found to be present without any symptoms in two patients in this series and four individuals had x-ray evidence of a duodenal ulcer.

All these patients came to surgery. Sixty-one percent were resectable and the remainder had only a biopsy or a palliative procedure. Seventy-two percent were dead within one year after operation and four are still alive.

These poor results indicate that the correct diagnosis is often made too late in many cases. The investigation of persistent epigastric distress, no matter how vague, must be thoroughly undertaken. The greatest single diagnostic aid available to the physician is a high index of suspicion.

References

1. Palmer, W. L.: Cancer of the Stomach, Gastroenterologia, 93:5-14, 1960.
2. Trapeznikov, N. N.: Results of Surgical Treatment of Cancer of the Stomach, B. M. J. 2:857-859, (Oct.) 1959.
3. Wangensteen, O. H.: Cancer of the Esophagus and the Stomach, a Monograph. American Cancer Society, 1951.
4. Brown, C. H.: Cancer of Pylorus Simulating Benign Duodenal Obstruction, 9m. J. Dig. Dis. 5:264-273, (Mar.) 1960.
5. Walters, W.: Gastric Carcinoma and Sarcoma, Postgraduate Medicine, 17:472-478, (June) 1955.
6. Ochsner, A. and Blalock, J.: Carcinoma of the Stomach, J.A.M.A. 151:1377-1384, (Apr. 18) 1953.
7. Rhoades, C. P.: Studies of Patients With Gastric Cancer, J. of Nat. Can. Inst., 7:333-336, (Feb.) 1947.
8. Rigler, L. G. and Kaplan, H. S.: J. of Nat. Can. Inst. 7:327-331, (Feb.) 1947.
9. Flood, C. A.: Carcinoma of the Stomach, Ann. Int. Med. 48:919-955, (May) 1958.
10. Comfort, M. W., Kelsey, M. P. and Berkson, J.: Gastric Acidity Before and After Development of Carcinoma of the Stomach, J. of Nat. Can. Inst. 7:367-373 1947.
11. Lipp, W. F. and Phillips, J. F.: Treatment of Carcinoma of the Stomach, J.A.M.A. 174:1683-1686 (Nov 26) 1960.
12. Sherman, R. S. and Snyder, R. E.: Roentgenologic Surveys For Gastric Neoplasms. J.A.M.A. 174:949-956 (Oct. 22) 1960.

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PRURITUS ANI

A Diagnostic Test and Indicated Medication

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The incidence of pruritus ani in a series of two-hundred and seventy-six private patients in whom a clinical diagnosis of colitis, cause undetermined, had been made, and on whom stool examinations were performed to determine the etiology of the colitis, was forty-eight patients, or 17.4%. This was not a sampling of a random population.

TABLE 1 INCIDENCE OF PRURITUS ANI

Pruritus Ani	48	17.4%
No Pruritus Ani	228	82.6%
	276	100 %

In a group of patients in whom a clinical diagnosis of a colitis had been made, the incidence of ulcerative colitis due to Endamoeba histolytica infestation, or to a pathogenic bacterial infection, will naturally be unusually high.

Unexpected was the incidence of a marked deficiency to a nearly complete absence of the natural lactobacillus group in the fecal bacterial flora, and an overgrowth of yeast, with one exception due to Candida albicans.

Table 2 summarizes the incidence of four conditions reported on stool examination each of which alone or concurrently with one or more of the other conditions has been demonstrated to be the cause of pruritus ani in these forty-eight individuals.

As a comparison, similar figures are given for two-hundred and twenty-eight individuals without pruritus ani.

Why some individuals with identical stool examination reports are afflicted with pruritus ani, and others are not, has not been determined.

However, specific medication directed at the condition reported on stool examination has been promptly successful, without exception, in achieving apparent 'cure' of pruritus ani in these patients.

TABLE 2

PRURITUS ANI 48 patients		
Deficiency of lactobacillus fecal flora	36	75%
Overgrowth of yeast (Candida albicans)	22	46%
E. histolytica cysts, precysts, or trophs.	38	79%
Pathogenic bacteria	9	19%
NO PRURITUS ANI 228 individuals		
Deficiency of lactobacillus fecal flora	137	60%
Overgrowth of yeast (Candida albicans)	56	25%
E. histolytica cysts, precysts, or trophs.	187	82%
Pathogenic bacteria	36	16%

During the course of a clinical evaluation of an intestinal amebicide, it was noted that some patients reported relief from pruritus ani when

negative stool 'cure' of amebic colitis was obtained. Others did not obtain relief from pruritus ani. The same was noted when follow-up stool cultures were negative for a treated pathogenic bacteria.

Why did the pruritus ani persist in some individuals but not in others?

Many antibiotics prescribed for amebic colitis, and a multitude of other indications, practically sterilize the fecal matter of pathogenic bacteria as well as of the natural lactobacillus group of bacterial flora. In some individuals antibiotic medication produces a genetic mutant of a non-pathogenic bacteria which becomes pathogenic.

However, the most important single cause of pruritus ani was found to be due to a deficiency of the lactobacillus fecal flora. Stool examinations of these forty-eight patients with pruritus ani reported a deficiency of the lactobacillus group in the fecal bacterial flora in thirty-six patients, or 75%.

TABLE 3 ETIOLOGY OF PRURITUS ANI

Deficiency of lactobacillus group alone, or with other pathogens	36	75%
Other pathogens alone or in combinations	12	25%
	48	100%

In this report, the deficiency of the natural lactobacillus group of fecal bacterial flora will be discussed as a cause of pruritus ani, together with its treatment.

A deficiency of the natural lactobacillus fecal flora can be determined accurately by examination of a random stool specimen. In many instances, repeated laboratory examinations of random stool specimens was a nuisance and an expense some patients were unable to afford.

An attempt was made to find an inexpensive, but accurate, substitute for laboratory stool examination. It was discovered that in a group of thirty-three patients whose pruritus ani was caused by a deficiency of the natural lactobacillus group fecal flora, the fecal pH was found to be an accurate indicator of a deficiency of the lactobacillus fecal flora.

This group of thirty-three patients whose stool examination reported a deficiency of the lactobacillus group fecal flora was asked to do their own stool pH determinations. With a deficiency of the lactobacillus group fecal flora, stool pH has been regularly reported 7 to 9. Stools with normal lactobacillus group fecal flora are regularly reported pH 6 to 5.

Correlation of fecal pH with stool examination report of a deficiency of the natural lactobacillus group fecal bacterial flora has been determined to be in the region of ninety-four percent. This has proved a great help in treatment of the condition. Table 4 is a summary of the study.

TABLE 4

Correlation of fecal pH with stool examination reports of a deficiency of the lactobacillus group fecal flora in thirty-three patients.

STOOL pH	NO. OF PTS.	CORRELATION
7 to 9	31	94%
6 or 5	2	6%
	33	100%

The pH Test of Fecal Matter

MATERIAL. The test paper used in this study is pHydrion® 4-9 paper.[1] The individual test papers are packaged in a glass vial with an attached color chart indicating the color range from pH 4.0 to 9.0. The pH number is a function of the color produced by the test paper when moistened with the material tested.

PROCEDURE. The first tissue wipe following a bowel movement contains sufficient fecal matter to moisten the strip of pH paper by simply smearing the test paper with the feces on the tissue. Excess fecal matter on the test paper, which would interfere with the color change, is wiped off. NOTE: *The test strip of paper is NOT moistened with water before smearing the fecal matter on the paper.*

READING THE TEST. The color of the test

1. Micro Essential Laboratory, Brooklyn 10, N. Y.

paper produced by the fecal matter is immediately compared with the color chart on the vial. The pH of the stool is read directly as a function of the test paper compared with the color chart.

COMMENT. No objection has been encountered from men or women who were asked to perform the test. Each bowel movement can be tested, and records kept, during the course of medication until the desired pH 6 or 5 is obtained and persists following stopping of medication.

Pruritus ani may, or may not, be present when the lactobacillus group fecal bacterial flora is deficient. The explanation is unknown.

Of sixty-one individuals whose stool examination was reported moderately deficient, extremely deficient, or nearly devoid of the natural lactobacillis group flora, random stool pH taken by the patient was reported as follows:

TABLE 5

STOOL pH	PRURITUS ANI PRESENT	ABSENT	
6	2	0	
7	2	7	
7.5	7	10	
8	16	11	
9	6	0	
Total	33	28	61

Clinically, when pruritus ani is a complaint and other pathogens reported on stool examination have been controlled by medication, a persistence of pruritus ani due only to the deficiency of the lactobacillus group fecal bacterial flora can be detected with about ninety-four percent accuracy by the stool pH test of 7 to 9. Also, progress of medication to restore the natural lactobacillus group fecal flora can be accurately followed by making a daily pH test of the feces. Recovery from pruritus ani was regularly accompanied by a persistent stool pH of 6 or 5.

Intensive clinical investigation and laboratory purged stool examinations (Dowell[2]) has confirmed the following statements:

1. A stool pH 6 or 5 is normal and usually indicates an abundant natural lactobacillus fecal flora.
2. A stool pH 7 to 9 is abnormal and generally indicates a deficiency of the natural lactobacillus fecal flora.

About fifty-four percent of individuals whose stool pH is 7 to 9 complain of pruritus ani.

Those individuals with no other pathogen in the feces whose pruritus ani is associated with a stool pH 7 to 9, indicating a deficiency of the natural lactobacillus group fecal bacterial flora, are regularly "cured" of their pruritus ani by restoring an abundant fecal lactobacillus group flora indicated by a stool pH 6 or 5.

TREATMENT OF MARKED TO EXTREME DEFICIENCY OF THE LACTOBACILLUS GROUP OF FECAL BACTERIAL FLORA. Malt Soup Extract powder[3] has been prescribed routinely for each patient when the fecal pH was reported 7 to 9 to restore the natural lactobacillus group fecal bacterial flora and the fecal pH to 6 to 5. Pruritus ani was also cured when due solely to the deficient lactobacillus group fecal flora.

Malt Soup Extract powder in one pound jars proved to be the most practical prescription. This preparation is a specially processed, non-diastatic extract of barley malt neutralized with 1.8% potassium carbonate. It is sterile but acts as a culture media to stimulate growth of the lactobacillus group of bacteria naturally present in fecal matter.

Routine starting dosage of two heaping tablespoonfuls morning and evening dissolves readily in cold or warm water, milk, coffee, fruit juice, tea, or other liquids. Three patients reported dusting the Malt Soup Extract powder on ice cream, together with chocolate syrup, to make a sundae. The powder has a mild malt flavor and a mild sweet taste.

Of sixty patients with a marked to extreme deficiency of the lactobacillus group of fecal bacterial flora, and a fecal pH reported 7 to 9, the following amounts of Malt Soup Extract

2. Dowell Laboratories, 204 East First Avenue, Mesa, Arizona.

3. Maltsupex® powder, Borcherdt Company, 217 North Wolcott Avenue, Chicago 12, Illinois.

powder were taken to restore the fecal pH to 6 or 5, as indicated in Table 6. Each of the thirty-three individuals in this group who also complained of pruritus ani were completely relieved of their pruritus.

TABLE 6 DOSAGE OF MALT SOUP EXTRACT POWDER

LBS.	NUMBER OF PATIENTS
1	25
2	16
3	9
4 or more	10
	60

A deficiency of the natural lactobacillus group of fecal bacterial flora occasionally causes a non-ulcerative type of colitis, abdominal distress and pain, indigestion, belching, borborygmus, "bloating," excessive flatus, and constipation. This type of colitis is relieved promptly by prescription of Malt Soup Extract powder.

TREATMENT OF INDIVIDUALS WHOSE STOOL EXAMINATION IS REPORTED NEARLY TO COMPLETELY DEVOID OF THE NATURAL LACTOBACILLUS GROUP FECAL BACTERIAL FLORA. Of the ten patients in Table 6 who required more than four pounds of Malt Soup Extract powder, it was finally recognized that when the lactobacilli group in the stool is absent, Malt Soup Extract powder alone cannot, and should not be expected to, restore a normal lactobacillus group fecal flora.

Routine treatment of patients whose stools were reported nearly, or completely, devoid of the lactobacillus group then became implantation of a live, natural lactobacillus group flora in a yogurt-like drink. The concomitant prescription of the Malt Soup Extract powder stimulated abundant growth of the lactobacilli implanted by the yogurt-like milk drink.

In this study series, the implantation of a live, natural, lactobacillus group flora was accomplished with Lacto-Bac.®[4] This is a highly concentrated culture, in a suitable liquid nutrient media, of the four lactobacilli: L. acidophilus, L. bifidis, L. bulgaricus, and L. casei.

L. acidophilus is believed to assist in digestion of milk. L. bifidis is believed to act as a catalyst for the other three lactobacilli—no specific deficiency effect is presently known. L. bulgaricus is believed to take part in the production of the growth factor. L. casei has an antianemic effect in that it produces the precursor of the folic acid factor.

Preparation of Lacto-Bac

One vial of Lacto-Bac is added to one quart of whole milk. This milk is then permitted to stand at room temperature for twenty-four hours, more or less, depending on room temperature, until a taste similar to yogurt develops. Too prolonged incubation produces sour milk with separation of the curd which is to be avoided. Should this happen, shake the bottle well, then add one cupful to a second quart of whole milk and taste at intervals until a pleasant yogurt flavor develops.

When the first quart of milk has reached a pleasant taste, remove one cupful and add to a second quart of milk as a "starter." This obviates the necessity of purchasing a vial of Lacto-Bac to prepare each quart of yogurt-like milk. This procedure may be continued for six weeks when it is advised to start with a fresh vial of Lacto-Bac.

When the "starter" cupful has been removed, the balance of the quart of yogurt-like milk is consumed daily, the larger the quantity, the sooner results will be obtained as measured by the fecal pH and relief from abdominal distress and constipation. To improve the flavor, this bottle of Lacto-Bac milk may then be placed on the milk shelf of the refrigerator at a temperature above four degrees Centigrade, or forty degrees Fahrenheit. Excessive chilling or freezing destroys the lactobacilli.

This yogurt-like Lacto-Bac milk drink is continued indefinitely until the lactobacillus group of fecal bacterial flora has been reestablished as indicated by the stool pH test of 6 or 5.

4. Lacto-Bac®, Dowell Laboratories, 204 East First Avenue, Mesa, Arizona.

Comment

It is advised, and many patients prefer, to mix the Malt Soup Extract powder in a glass of Lacto-Bac milk just before drinking it. Recovery of a stool pH 6 is thereby hastened because of the stimulus to growth of the implanted lactobacilli.

When the stool pH is 8 or 9, little laxative effect will be noted. However, a laxative effect will be noted as the stool pH approaches 6. Reduction of dosage of the Malt Soup Extract powder is then mandatory or a diarrhoea may ensue.

This natural laxative effect is apparently due solely to the restoration of the lactobacillus group fecal bacterial flora. Bowel movements then become regular without further medication.

A stool nearly or completely devoid of the lactobacillus group of bacteria should be treated with the Lacto-Bac milk to which has been added one tablespoonful of Malt Soup Extract powder to each glassful of milk. The yogurt-like milk can be discontinued when the stool pH nears 6. The Malt Soup Extract powder is continued at a reduced dosage.

A stool markedly deficient in the lactobacillus group flora, with a stool pH 7 to 9, responds promptly to prescription of Malt Soup Extract powder alone. Restoration of a natural lactobacillus group flora in the feces can be assumed when the stool pH checked two or three times weekly persists at 6 or 5 for several weeks following discontinuance of the Malt Soup Extract powder.

Malt Soup Extract powder, together with Lacto-Bac milk when indicated, has promptly relieved pruritus ani without relapse to date when due to a deficiency of the natural lactobacillus group in the fecal bacterial flora.

Conclusions

This study has demonstrated that the normal fecal pH is 6 or 5 and usually implies a normal lactobacillus group bacterial flora.

Abnormal fecal pH 7 to 9 was found to be regularly due to a deficiency of the natural lactobacillus group bacterial flora when checked by random or purged stool specimen examination in the absence of other fecal pathogens.

Pruritus ani, due to a deficiency of the natural lactobacillus group fecal bacterial flora, can be accurately diagnosed by a random stool pH 7 to 9 taken by the patient, as well as by random or purged stool laboratory examination.

Other causes of pruritus ani are known and will be reported in another article.

Malt Soup Extract (Borcherdt) powder alone regularly restores to normal a marked deficiency of the lactobacillus group fecal bacterial flora by stimulating their multiplication and growth.

A stool nearly or completely devoid of the lactobacillus group bacteria is best treated by reimplanting a natural lactobacillus group flora with Lacto-Bac® milk (Dowell), together with Malt Soup Extract powder.

Malt Soup Extract powder can confidently be expected to cure pruritus ani due to a deficiency of the lactobacillus group of bacteria in the feces.

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Surgery for Fallopian Tube Occlusion

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Operations for the correction of tubal occlusion were not in great favor with gynecologists of the past generation; however, the subject has become more provocative in recent years. Spurred on by the findings of Rubin,[1] which showed that in his study of six thousand instances of female sterility, forty percent was due to closed fallopian tubes, and further intrigued by Greenhill's[2] report in 1937, which showed that of eight hundred and eighteen cases only fifty-four pregnancies resulted, or one pregnancy in fifteen operations and one live baby in twenty-two operations, many gynecologists realized that newer and better approaches were mandatory. Further investigation by interested doctors convinced them that Greenhill's poor report could be explained on three counts: poor patient material, inadequate diagnostic criteria and injudicious selectivity.

The painstaking work with polyethylene tubing and hoods in fallopian tuboplasty by Hellman,[3] Castallo and Wainer,[4] Rock, Mulligan and Easterday[5] and others has provided an enormous impetus to the entire consideration of tubal occlusion, and consequently more operations have been performed.

In 1956, Greenhill[6] resurveyed two thousand patients. The results were one pregnancy in five operations and one live baby in six operations. Also in 1956, Seigler and Hellman[7] collected reports of two thousand, two hundred and eighty-five tuboplasties, which showed a ratio of one pregnancy in 4.45 operations and one live baby in six operations. The productive results of today's procedures, over those of the previous twenty years, have increased many times. For instance, the latest figures of Moore-White[8] show thirty-eight pregnancies from sixty-nine operations (fifty-five percent) with twenty-two living children (thirty-two percent) and four pregnant patients.

Selectivity and Evaluation

In the surgical management of the patients with fallopian tube occlusion, the selection of patients must be made carefully. A complete evaluation of both husband and wife is essential and should be conducted according to the cri-

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teria set forth in the booklet of the American Society for the Study of Sterility. The husband's physical condition, sperm count, and genital tract abnormality, if present, must be studied. A complete history of the wife must include previous surgical procedures. A general physical and pelvic examination must be made. Basal body temperature graphs (BBT), endometrial biopsy, and ferning smears are necessary for proof of ovulation. PBI, cholesterol, and BMR tests are necessary to evaluate thyroid function. Rubin Tests are necessary to show fallopian tube occlusion; however, the possibility of tubal spasms in the hyperkinetic person should not be overlooked, and repeated Rubin Tests, using tranquilization are important.

Hysterosalpingography is considered the most important single aid in the diagnosis of fallopian tube occlusion. The use of oil-soluble media under fluoroscopy, with stereoscopic films taken at the time and a twenty-four-hour following film, is preferred. If the hysterosalpingogram is questionable, it should be done under anesthesia to rule out tubal spasm. The hysterosalpingogram shows the location of the occlusion and if it is bilateral, but unfortunately, it will not show the maximum extent of the occlusion. It also demonstrates uterine abnormalities. Many times at second operations, it has been found that instead of tubal occlusion, at the midportion, there is only a tubal stump and no remaining tube can be found. This, of course, would be avoided if good surgical histories of these patients were available; however, in the past many of these operations were poorly described in hospital charts.

Surgical Considerations

All patients should be treated preoperatively with a course of antibiotics, to prevent postoperative reaction from old pelvic inflammatory disease. Surgical technique is of extreme importance. Sharp dissection, gentle handling of tissues, complete and careful hemostasis, and the use of delicate instruments, are recommended. Atraumatic 5-0 and 6-0 catgut are essential as suture material. Polyethylene tubing that has been electronically sterilized and animal-tested must be available in the required sizes. It is imperative that after the abdomen is entered, a complete appraisal be made of both tubes and ovaries before any surgery is started. The laparotomy should be preceded by dilatation of the cervix, and injection of Methylene Blue to delineate the area of excision and facilitate the passing of the polyethylene tubing.

The proper use of splinting materials, particularly polyethylene tubing, increases the number of good operative results. We think polyethylene tubing should always be used in midtubal occlusion and cornuplasty, and we consider it a help in salpingolysis and salpingoplasty, whenever the trauma is apt to produce sufficient edema to threaten tubal patency. Techniques of using splinting materials vary according to the surgeons. There is no routine manner of using polyethylene tubing or removing it. Probably the nearest approach to standard procedure is the use of polyethylene in cornuplasty and cornual implantations. Here we recommend that the tubing be brought down the uterine cavity and out the cervix and then sutured to the cervix. Whenever polyethylene tubing is used, antibiotic therapy should be continued throughout the postoperative period. Steroid therapy should be considered when there is a great deal of operative reaction.

Endometriosis involving the tubes and ovaries is difficult to evaluate at the time of operation, because prime consideration must be given to conservation of ovarian function. The proximity of the tube to the ovary is essential for proper fimbrial migration. In the four percent[9] of infertile women who have endometriosis, conservation is extremely important, because approximately thirty-five to forty percent become pregnant after conservative surgical management of tubal and ovarian endometriosis. Preoperative progestins should be used for at least six months in severe endometriosis cases, because these facilitate identification of normal tissues resulting in better conservation.

Flexibility is the keynote of Fallopian tuboplasty. The surgeon with a fixed mind is not adapted to this kind of work. No two cases are the same; the extent of the operation to be performed, and the particular procedure for each case are dictated by the conditions in the abdomen at the time of surgery. Each case requires the surgeon to improvise to meet the situation.

Indisputably, the surgeon who does the primary fallopian tuboplasty has the best chance of success, but his skill and experiences in tubal surgery are of greatest importance. The results of secondary operations on the tube are markedly diminished. It is imperative, in the best interest of the patient, to consider the best trained man in tubal plastic surgery in the area. The more tubal operations he has done and the more delicately he handles tissues, the greater the chance of success. The more normal the tissues at operation, the better the results. Therefore, it is imperative to determine the cause of sterility prior to operation. The degree of success can be forecast according to the cause of sterility.

Pelvic inflammatory disease is the most frequent cause of tubal occlusion with the resulting salpingitis ending in tubal adhesions, fimbrioclosure with hydrosalpinx, tubo-ovarian abscesses, and pelvic peritonitis. Peritubular adhesions and hydrosalpinx are the most common operative findings. The greatest tissue destruction occurs in fimbrioclosure and hydrosalpinx. In fimbrioclosure with extreme clubbing, the mucosa is completely thinned out. the muscularis is almost nonexistent, and the fimbriated end is unrecognizable. The question arises, that even though patency can be obtained and maintained with conservative surgery through the use of polyethylene splints and hoods, can these tubes function normally?

Postabortal endometritis, postpartum endometritis, and endometriosis are the other positive etiologic factors in tubal occlusion. Tuberculosis of the fallopian tube is another cause of tubal occlusion, but is found very infrequently in the United States. Sterilization procedures also result in tubal occlusion. On the other hand, perisalpingitis with peritubular adhesions does not result in a great deal of destruction of the mucosa, and therefore, gives the best results.

Conclusion

In surgery for fallopian tube occlusion, it is absolutely essential that the entire procedure, the operative morbidity and the possible cure be discussed with both husband and wife prior to surgery. The percentage of success should be explained in definite figures. That the woman may be subjected to possible morbidity and mortality, albeit low, should be outlined firmly but gently.

Careful evaluation, together with selectivity and conservative surgery, is the keynote of fallopian tuboplasty. Splinting materials, specifically polyethylene tubing, produce greater tubal patency. However, patency does not mean pregnancy; especially in severely damaged tubes with apparent failure of regeneration of normal tubal mucosa, which is so essential to fertility. Complications are minimal, especially if extreme care is used in handling tissues.

The overall pregnancy wastage is about fifteen to twenty percent, if abortions and ectopics are included. Tuboplasties should be performed only by gynecologists who have developed special interest and skill in this specialized surgery.

References

1. Rubin, I. C.: Uterotubal insufflation as a test for tubal patency, 1920-40. Am. J. Obst. and Gynec. 40:628, 1940.

2. Greenhill, J. P.: Evaluation of salpingostomy and tubal implantation for treatment of Sterility. Am. J. Obst. and Gynec. 33:39, 1937.

3. Hellman, L. M.: The use of polyethylene in human tubal plastic operations. Fertil. and Steril. 1:463, 1950.
4. Castallo, M. A. and Wainer, A. S.: Polyethylene intubated salpingoplastay: Newer approach to closed tube sterility. Am. J. Obst. and Gynec. 66:385, 1953.
5. Rock, J., Mulligan, W. W. and Easterday, C. L.: Polyethylene in tuboplastay. Obst. and Gynec. 3:21, 1954.
6. Greenhill, J. P.: Present status of plastic operations on fallopian tubes. Am. J. Obst. and Gynec. 72:516, 1956.
7. Siegler, A. M. and Hellman, L. M.: Tubal plastic surgery: Report of survey. Fertil. and Steril. 7:170, 1956
8. Moore-White, M.: Evaluation of Tubal Plastic Operations. Int. J. Fertility. Vol. V, No. 3:237, 1960.
9. Wainer, A. S. and Castallo, M. A.: Surgical Treatment of Tubal Occlusion. Cl. Obst. and Gynec. Vol. 2, No. 3:789, 1959.

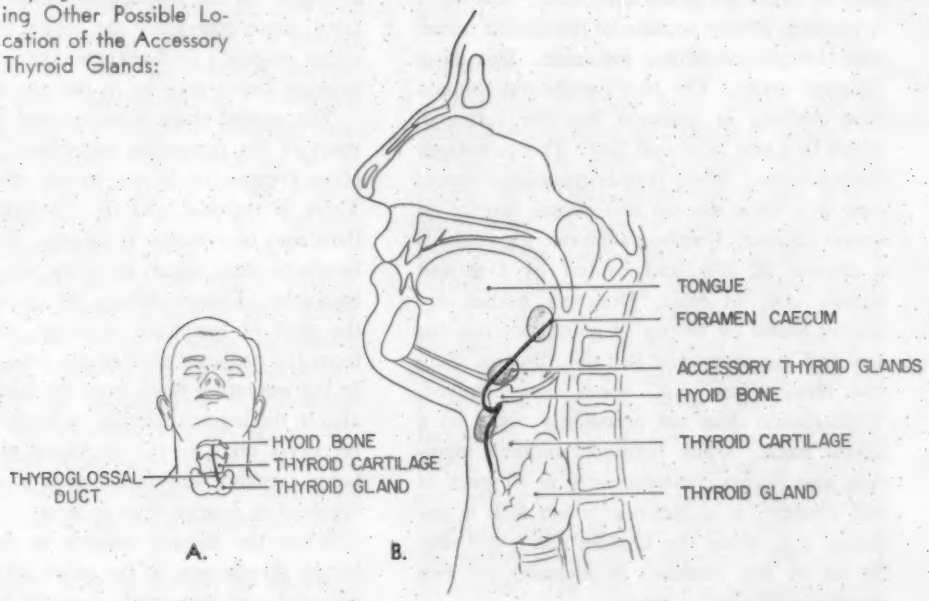
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CLINI-CLIPPING

EMBRYOLOGY OF THE THYROID GLAND

A. Course of the Thyroglossal Duct.

B. Lateral View of the Thyroglossal Duct Showing Other Possible Location of the Accessory Thyroid Glands:



What Is Lymphogranuloma

Lymphogranuloma venereum is a systemic disease caused by a virus. The infection is spread mostly by sexual activity and occurs predominantly in Negroes. The disease has been given numerous names through the years. For the sake of clarification, we should standardize the nomenclature by calling it lymphogranuloma venereum. An alternative may be Nicolas-Favre Disease. This is necessary in order to avoid confusion. Confusion is possible, chiefly because of the similar name, with lymphogranuloma inguinale. This is a different entity. The two lymphogranulomata have nothing in common but the surname, which in Latin is placed first. This is enough for confusion. While lymphogranuloma venereum is a virus disease and occurs mostly on sexual contact, lymphogranuloma inguinale is a disease of filth and caused by Donovan bodies. Or, at least, Donovan bodies are always found on biopsy of granulomatous tissue and are diagnostic for this disease. Skin and other tissue, e.g., bones, are involved. Transmission does not necessarily occur on a sexual basis. While lymphogranuloma inguinale also occurs predominantly in Negroes in this country, it is endemic where filth is endemic, e.g., along the Eastern coast of India. So let us not confuse, or identify, the two diseases with similar names.

Lymphogranuloma venereum is the disease under discussion. Once more: it is a viral disease. The virus is a large virus and belongs to the lymphogranuloma-psittacosis-ornithosis group. This has some significance in diagnosis. The name of the virus is Miyagawanella Lymphogranulomatis. Incubation time is from seven to twenty-one days. The primary lesion is a papule or a herpetiforme erosion or ulcer. The lesion is indolent and mostly so tiny, so as to be frequently overlooked. In the human male, it occurs at the glans penis, the sulcus coronaris, the urethra or the praeputium; sometimes the scrotum. In the woman, the site may be the labia, more commonly the cervix uteri, or the upper vagina. In both man or woman, the primary lesion may be in the ano rectal area.

The second stage is manifested by involvement of the lymphatic apparatus. This takes place approximately one month after contact. There is regional adenitis. During this stage there may be systemic symptoms. Fever, chills, headache, may occur; anorexia, anemia, lower backache. Lymphadenitis, of course, follows the path of lymphatic drainage, in the man, from the penis or anus to the inguinal glands. In the woman, it flows from the labia, or anus, also to the inguinal glands, or from the vagina, or cervix uteri, to the perirectal glands. The latter explains why the rectum is more often involved in women than in men.

When the disease extends to the regional lymph glands, one or the other gland may be enlarged and indurated; it might be discrete. In this stage, lymphadenitis may still subside after a few days. If it affects more glands, however, periadenitis occurs. This may suppurate, form fistulous tracts, and perforate to

Venereum?

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the surface of the integument. This condition is known as Bubo. Characteristic is the unilateral involvement of inguinal glands.

Further progress is manifested by thickening of skin and subderma, or mucous membrane and submucosa. Proliferation of connective tissue causes stasis and dilatation of lymph channels and veins. The overlying skin becomes irregular in surface. A weird and ugly enlargement of the genitals and anal area may result, often with ulcerations. It distorts the penis in men and the vulva in women, where it is called esthiomene. In the woman, in addition, simultaneously or independently, there may be stricture of the vagina and fistulas may form to the rectum or to the urinary bladder. Anal polypoid masses can be mistaken for hemorrhoids.

Moreover, and more frequently in women, because of the perirectal glands, the rectum itself may be involved. Proctitis, ulceration, with diarrhea, hemorrhage, and purulent discharge may ensue. Granulomata may develop. The rectal wall thickens and the lumen narrows. Stricture or stenosis results. (These two terms are a matter of semantics.) Increasing constipation and alternating diarrheas are symptomatic.

The stricture may be tubular or diaphragmatic. Tubular, if it involves any length of the rectum, usually from one to two and one-half inches. It may have the form of a funnel. Diaphragmatic, if a horizontal shelf separates the upper rectum from its most distal portion. This occurs in an average distance of six centimeters from the anal verge. In this case, the distal portion of the rectum and the anus may appear normal. The diaphragma is a hard, smooth, whitish, fibrous disc; the tubular stricture may have an irregular surface.

The lumen of this stricture or stenosis may be as narrow as to be passable only for a pencil, or even smaller. It may obliterate altogether.

Diagnosis

Diagnosis is made from history, clinical symptoms and signs, as elaborated above.

Frei test is most frequently done with Lygranum.® Question patients to see if they are sensitive to eggs because chicken yolk is used for the manufacture of Lygranum. A patient sensitive to eggs should get the benefit of all caution against allergic reactions. On the flexor side of the forearm one-tenth of a cc. is injected intradermally after a control has been injected into the other arm first. After forty-eight to seventy-two hours, a positive test is manifested by a papule of at least six millimeters diameter. A surrounding red halo is not so important for a positive reading as is the minimum of six millimeters diameter of the papule. The Frei test remains positive for life. This has to be considered if other condi-

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tions with similar symptoms should afflict the patient in his later life. Also note that the Frei test may be positive in Psittacosis-Ornithosis, due to virus relation.

In the laboratory, there may be slight leukocytosis, monocytosis, or eosinophilia. The plasma globulin is usually elevated and therefore the erythrocyte sedimentation rate increased. Also, there may be a false positive syphilis test. However, syphilis may be present, too.

Differential Diagnosis

In the presence of colitis, ulcerative or not, and a previous history of lymphogranuloma venereum, a positive Frei test is not unequivocally diagnostic. A bowel content fixation test should be done. Tuberculosis and other granulomatous disease should be differentiated. Most important is carcinoma. In carcinoma of the rectum, the surface of the lesion is usually irregular and brittle, and easily bleeding. The lumen in carcinoma is eccentric, in lymphogranuloma venereum the lumen is concentric. Biopsy is necessary.

One should realize that carcinoma has been found in a greater percentage in patients having lymphogranuloma venereum than in patients of the same group and age without this disease. Simultaneous presence must be taken in consideration. This, however, does not hold true for the rectum and anus only. Even carcinoma of the uterus or other parts of the colon are more frequent. The relation between the two diseases is not known. Lymphogranuloma venereum is a virus disease. Carcinoma is a tumor. The ever-growing interest researchers indicate in virus as possible causative agent of carcinoma might induce one to risk some speculation, at best, at this stage of the game. Time (and more research) will tell. Lymphogranuloma inguinale as a distinct entity has been stressed in the beginning of this paper.

Complications

They are coloproctologic and systematic.

The coloproctologic complications have been mentioned in the description of the clinical aspects of the disease.

Systemic complications have also been mentioned in part. Diarrheas may cause loss of fluid and electrolytes, causing imbalance. There may be general lymphadenitis, arthralgias, lower backache. At times, there is constricting pericarditis, endocarditis, embolism. Hepatitis and jaundice may occur, also glomerulonephritis, even central nervous system involvement with Meningo-Encephalitis. Strictures of other intestinal segments are possible.

Histo-Pathology

In biopsy, one may find large mononuclear cells, abscesses, surrounded by epithelioid cells. A few giant cells (Langhans, Sternberg). Necrotic lesions, resembling syphilis. The blood vessels are mostly unchanged. However, there may be hyalinization of the intima.

Therapy

In the active stage: "Wide-angle" antibiotics, chiefly newer "mycins." In advanced cases of rectal stricture, colostomy must be performed. Local electrocautery excision of diaphragmatic stenosis.

A warning should be sounded: Dilatation of a narrow fibrotic lumen is painful. It is also dangerous, and more so in general anesthesia: Tears might occur and run up the rectal wall into the peritoneum. Peritonitis is the result. Also uncontrollable hemorrhage may occur.

136 Henry Street

THE SILENT PARTNER OF CHRONIC ILLNESS

HYPOVENTILATION

From the time, ". . . the Lord God formed man of the dust of the ground, and breathed into his nostrils the breath of life . . ." (Genesis, Chapter 2, 7th verse), to our present concern over the atmospheres on the nearby planets, philosopher, physician and faddist alike have been fascinated by man's breathing mechanism.

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Pulmonary hypoventilation, though often present in chronically ill patients, is rarely recognized as a contributing disabling factor. Its subtle development, its non-dramatic symptoms and the lack of specific therapeutic measures may lull the physician into disregarding its importance.

Manifestations of acute respiratory failure associated with cardiovascular disease, bulbospinal poliomyelitis, and pneumonia are so dramatic and so well known that measures to alleviate these conditions are by now almost routine. All physicians are aware of the immediate need for resuscitative measures in drowning, electric shock, and certain chemical and organic poisoning. Also, conditions which interfere with the flow of air to the lungs, such as upper airway obstruction and trauma directly involving the respiratory system, are usually handled as an emergency and dealt with accordingly. However, there are many chronically ill patients in whom hypoventilation, though a secondary complication, may be severe enough to cause significant neurologic, psychologic and metabolic disturbances. Unfortunately, these symptoms are too often passively accepted by both the patient and physician as being the inevitable progression of the primary disease.

Chronic Diseases Which Decrease Breathing Capacity

Respiratory insufficiency will most often be found in those conditions where *osteoarticular changes* tend to immobilize or deform the rib cage or where the bellows action is inhibited

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by defective *neuromuscular control*.[1] In the first instance, pulmonary ventilation may be reduced by ankylosis or pain in the costovertebral and intervertebral joints. This is usually caused by fibrosis, calcification and ossification of the ligaments and cartilage and by degeneration of the intervertebral discs. Congenital or acquired deformities which prevent full excursion of the rib cage will also contribute to hypoventilation. Here, rheumatoid spondylitis, kyphoscoliosis and pectus excavatum carinatum are among the most common causes.[2]

A somewhat larger group includes those conditions in which defective neuromuscular control of the respiratory mechanism limits ventilation. The muscle rigidity of Parkinson's disease and the spasticity, weakness and incoordination characteristic of multiple sclerosis are not restricted to the muscles of locomotion alone. They also affect respiration by decreasing the thoracic space, increasing the work of respiration and by interfering with the automatic rhythm of breathing. In the large group of cerebral palsies, there may also be athetosis to further decrease the efficiency of the breathing mechanism.

Among the other conditions where defective neuromuscular control may reduce ventilation are: cerebral vascular accidents, muscular dystrophy, Guillain-Barré syndrome, amyotrophic lateral sclerosis and traumatic injuries of the spinal cord, roots and nerves.

Perhaps a third group may be added to this rather arbitrary classification which would include those persons in whom both neuromuscular and osteoarticular disturbances contribute to alveolar hypoventilation. The geriatric patient, who has a fixed rib cage and general muscle weakness, as well as the extremely obese person, with an elevated diaphragm and relatively immobile chest, might well fit in this group.[3] However, it is important to look for symptoms of alveolar hypoventilation in all cases where the disease has necessitated long periods of bed rest, wheel chair confinement, or where a body cast, or chest brace, has been used for an extended period of time.

Clinical Manifestations

Pulmonary hypoventilation will cause a variety of symptoms which are very often wrongly attributed to causes other than hypoxia and hypercapnia. Because chronic carbon dioxide retention may produce vasodilatation, congestion and edema of the brain accompanied by headaches, changes in mental function and papilledema, too frequently the physician tends to favor a neurologic diagnosis such as encephalitis, senility, depressive neurosis and even brain tumor.[4] More often, however, these symptoms are accepted as a component, an exacerbation or a progression of the primary disease.

When alveolar hypoventilation persists, the chronically ill patient may exhibit a fairly clear-cut picture of CO_2 narcosis. This may include somnolence, lethargy and lassitude. He may appear mentally confused and respond poorly to direct questioning. The examination may be hampered because of his reduced awareness, his poor memory and his alternating periods of irritability and fatigue. In some instances, he may have tremor and twitching of the extremities; he may complain of headaches when supine, or on awakening, and may even fall asleep during the course of the examination.

Weak musculature and a rigid thorax will, of course, adversely alter the mechanical efficiency of the respiratory system. The patient may talk with a weak, low voice while pausing frequently to catch a deep breath. He may not be able to cough, blow his nose, sneeze, or clear his throat effectively. His breathing may be tachypneic and shallow. If there is associated cardiac decompensation cyanosis may be be present.[5]

Evaluation of Respiratory Function

The standard examination of the respiratory system, which includes inspection, palpation and percussion of the chest as well as auscultation of the lungs and the necessary x-rays, or fluoroscopy, may reveal the underlying cause of some of the above mentioned symptoms. However, there are a few fairly simple tests which might well be added in order to

obtain a more complete picture. Out of the many tests used to evaluate respiratory function, we will describe only a few of the most simple. These require a minimum amount of equipment, can be performed by the physician in his office or in the patient's home and take very little time to administer. Yet they give a fairly valid indication of the patient's respiratory level.

1. VITAL CAPACITY (V.C.) Total amount of air which can be actively forced out of the lungs after a maximal inhalation. (Normal* —4-5 liters.) Most medical supply houses carry one or more of a variety of portable respirometers designed to give the required information. In the absence of a respirometer, however, a rough estimate may be obtained by having the patient blow into a plastic freezer bag of known volume.

2. BREATH HOLDING TIME (B.H.T.) The length of time the patient can hold his breath. (Normal*—45-60 seconds after inhalation; 20-30 seconds after exhalation.) The patient is instructed to inhalt deeply, exhale completely and after a second deep inhalation to hold his breath as long as possible.[6] When testing B.H.T. after exhalation, the patient is instructed to exhale completely inhale deeply and after a second exhalation to hold breath as long as possible.

3. COUNTING ALOUD BY THOUSANDS (Normal*—20,000-30,000.) The patient is instructed to inhale deeply and start counting aloud (one thousand, two thousand and so on) using his normal speaking voice. He should try to reach the highest number possible without taking a second inhalation.

4. MATCH TEST (Normal — the patient performs with ease.) The patient is instructed to inhale deeply and blow out a standard book match after the initial flair has burned out. The match is held six inches away from the mouth and the patient is told to blow with the mouth open rather than by pursing the lips.[7]

5. COUGH (Normal—the patient performs with ease.) The patient is instructed to take a deep breath and cough as loud as possible.

If two or more of these tests fall far below the normal levels, then hypoventilation should be suspected and treatment to alleviate the condition should be started immediately. For the physician who wishes to make further and more definitive studies, most large hospitals have both the technical personnel and the equipment to supply him with the exact measurements of vital capacity, tidal volume, minute volume, the maximum breathing capacity and the one- and three-second-timed vital capacity. Blood chemistry studies to check arterial pH, arterial O_2 saturation and alveolar CO_2 concentration can also be done to further help in the diagnosis.

Methods of Improving Respiratory Function

Recognition of chronic hypoxia and adequate treatment to improve ventilation will in most instances result in a healthier, more cooperative, alert and responsive patient. Often a mild respiratory deficiency can be overcome by making the patient aware of the problem and supplying him with a few hints on proper clothing, hygiene, posture, diet and simple exercises. Evaluating the drugs being used to treat the primary disease and counteracting those which are respiratory depressants such as morphine, curare, and barbiturates should be done whenever possible. Also, if medically feasible, drugs such as the amphetamines may stimulate the patient toward greater activity and thus indirectly improve his breathing function. Nicotinic acid, caffeine, pentamethylenetetrazol and other central nervous system and cardiorespiratory stimulants will produce a rapid though temporary increase in the rate of O_2/CO_2 exchange. In selected patients, expectorants, bronchial antispasmodics and antihistaminics will lessen the work of respiration by clearing the bronchial tree of tenacious secretions and by enlarging the bronchial lumen and thus increasing the functional respiratory area.

* All normal values refer to young male adults at rest. Values will vary with age, sex, size, weight and physical condition.

● SURGERY is rarely performed to relieve chronic hypoventilation. However, procedures aimed at correcting a collapsed spine or deformed rib cage might improve ventilation by allowing for greater lung expansion. Muscle transplants of the platysma to the upper ribs, fascial slings to anchor the lower rib cage to the umbilicus or pubic crest and anastomosis of the vagus nerve to replace a paralyzed phrenic nerve have been performed experimentally with varying degrees of success.

● MECHANICAL AIDS such as corsets, braces, supports and other devices used to improve posture will not necessarily improve respiratory function, since even a slight restriction of the rib cage or spine might interfere with ventilation. However, noticeable improvement of respiratory function can be achieved with these aids when all the mechanical aspects are evaluated on an individual basis. This requires a careful prescription, a competent appliance maker and follow up functional testing. Some patients may even require the use of tank respirator, a rocking bed or intermittent mouth positive pressure when upper respiratory infections cause a dangerous drop in the vital capacity.

● EXERCISE. Today it is an accepted fact that a certain amount of supervised exercise will be beneficial in most diseases. Generally, even mild exercise, if done regularly will improve skeletal and cardiac muscle tone, stimulate circulation and increase the depth and rate of respiration. There are, however, certain specific exercises which will directly improve the respiratory mechanism.

1. *Breathing Awareness.* The patient suffering from a chronic disease is rarely aware that much of his discomfort may be due to respiratory insufficiency. Sometimes an incapacitating illness may have enforced limited physical activity for a period of time and the patient's respiratory system may have adjusted to a lowered O_2 tension. This condition is not always spontaneously reversible. If physical improvement is to be expected, adjustment in the respiratory level must be made to meet the metabolic demands of increased activity. The role and mechanism of respiration should be explained to the patient. He should be taught to practice forced inhalation and exhalation at regular intervals and should be helped to become aware of the voluntary components of the respiratory system.

2. *Posture.* The importance of correct posture and its relationship to good ventilation, is often overlooked in treating the chronically ill. Every attempt should be made to position the patient, whether standing, sitting, or lying down so that the breathing mechanism is at its optimal functional level. Any upper extremity braces, corsets or casts should also be checked to see if they are limiting respiration.

3. *Mobilization, Stretching and Manipulation.* Long-term illness, and the enforced inactivity which often accompanies it, may result in pathologic changes in soft tissues, joint structures, muscle fibers and even in the bones themselves. Muscle tightness and atrophy, capsular and fascial shrinkage, ligament and tendon shortening, adhesions and osteoporosis and soft tissue fibrosis all may be caused by immobilization rather than by the primary disease. Therefore, a program to prevent or overcome some of these effects should be initiated whenever feasible.

Active or passive range of motion exercises can become part of a daily patient care plan, if initiated early and, if the patient and his family, or attendant, are properly impressed with its importance. Gentle, progressive stretching can be beneficial where shortened tissues are interfering with rib cage excursion. Special attention should be given to the shoulder girdle, the neck and back joints. Skilled manipulation and massage can often loosen tight joint structures, improve circulation and allow for pain-free motion.

4. *Strengthening Exercises.* Graded exercises using manual resistance or weights and pulleys may be used to increase strength in the shoulder girdle, abdominal muscles and diaphragm. Resistance to exhalation by means of blow bottles or balloons will increase strength in the abdominal and internal intercostal muscles. Singing, shouting and reading

aloud will also implement a respiratory reconditioning program.

5. *Glossopharynageal Breathing (Frog Breathing).* This is a substitute or supplemental method of forcing air into the lungs by using the muscles of the mouth and throat as a pump.[8] Patients suffering from chronic ventilatory deficiency can be taught to engulf a quantity of air in the mouth and by pressure of the tongue, cheeks and pharynx push their air into the trachea. This process is repated until sufficient pressure is built up in the lungs and the air can be exhaled by the rebound of elastic pulmonary tissue. By repeating this procedure, enough oxygen to meet sedentary bodily demands can be provided. As an exercise, this technique can help mobilize the rib cage and stretch the diaphragm by the internal pressure of the fully inflated lungs. Maximum inhalation with this method can build up enough intrapulmonary pressure to allow for efficient coughing to clear bronchial secretions. Although "Frog Breathing" has been used mainly for the respiratory weakness of poliomyelitis, it can also be of benefit in selected cases of multiple sclerosis, cervical cord injuries and other diseases where bellows action is impaired.

Summary

Almost every person suffering from a disabling chronic illness will also be burdened by pulmonary hypoventilation.

Although at times, this syndrome may be difficult to distinguish from the symptoms of the primary disease there are several fairly simple tests which will help establish the diagnosis.

Once hypoxia is recognized, effective methods of improving pulmonary ventilation can be included as part of the overall patient management program.

References

1. Osborne, E., Jr., Brinkman, G. L. and Noe, F. E.: Hypoventilation Syndrome: Physiologic Studies in Selected Cases. Annals of Internal Med. 48:50-59 (Jan.) 1958.
2. Ebert, R. V.: Pulmonary Failure. Disease-A-Month. The Yearbook Publishers Inc. (Oct.) 1958.
3. Scalettar, R., and others: Alveolar Hypoventilation and Cardiopulmonary Failure in Obesity. U. S. Armed Forces Med. Journal. 11:774-780 (July) 1960.
4. Austen, F. K., Carmichael, M. W. and Adams, R. D.: Neurologic Manifestation of Chronic Pulmonary Insufficiency. New England Journal of Medicine. 257:579-590 (Sept.) 1957.
5. Spier, N. and Karelitz, S.: The Pickwickian Syndrome. A.M.A., Journal of Diseases of Children. 99:822-827 (June) 1960.
6. Kohn, R. M.: Breath Holding Test for Cardiac Status. Circulation. 20:721-722 (Oct.) 1959.
7. Snider, T. H. and others: Simple Bedside Test of Respiratory Function. J.A.M.A. 170:1631-1632. (Aug. 1) 1959.
8. Dail, C. W., Affeldt, J. E. and Collier, C. R.: Clinical Aspects of Glossopharyngeal Breathing. J.A.M.A. 188: 445-449 (June 11) 1955.

General References

- Brody, A. W.: Pulmonary Function Tests in Rehabilitation. Arch. Phys. Med. 41:215-219 (June) 1960.
- Fowler, W. S. and Miller, R. D.: Physiologic Consideration in the Diagnosis and Treatment of Ventilatory Insufficiency. Arch. of Int. Med. 102:866-870 (Dec.) 1958.
- Hale, E. H.: The Varied Causes of Shortness of Breath. Journal of National Med. Assoc. 51:135-136 (March) 1959.
- Horton, G. E. and Drerup, A. L.: Practical Pulmonary Function Testing for the Practicing Physician. Geriatrics, 14:284-292 (May) 1959.
- Meneely, G. R.: Practical Evaluation of the Function of the Lungs. Industrial Med. and Surg. 29:290-304 (June) 1960.
- Comroe, I. H., Jr., and others: The Lung: Clinical Physiology and Pulmonary Function Tests. Chicago, The Year Book Publishers, Inc., 1955.

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Gastrointestinal Disorders of Aging

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Geriatic gastroenterology is perhaps a false and needless division within the field of gastrointestinal interests. It is likely that the average patient with a digestive complaint who consults the generalist or internist fits into the age group which is in the arbitrary domain of the gerontologist. In general, the elderly patient may be afflicted with just about all of the same gastrointestinal problems as the mature adult, but through certain physiologic effects of advancing age, has special disease tendencies and metabolic differences that relate to his age level alone.

The purpose of this presentation is to discuss in the broad view some of the more common problems peculiar to senescence, but to avoid the wide overlap that would occur in any effort to cover the complete catalogue of possible digestive disorders. The considerations of gastrointestinal malignancy from the viewpoint of age do not materially differ from the overall aspect of neoplasia in general and therefore will be omitted here. More pertinent to our topic is the mention of some of the known, or suspected, events that occur in the gastrointestinal tract as a natural effect of aging. Some of the major problems of senility relating to the digestive system are:

1. Nutrition
2. Malignancy
3. Hiatal hernia
4. Diverticula
5. Peptic ulcer
6. Hemorrhage
7. Drug effects
8. Constipation

An assessment of nutrition in the general sense is a reasonable starting point, since nutritional adequacy is indisputably the common metabolic denominator in both disease and in positive health.

We know that there is a decrease in oxygen uptake per square meter of bodily surface in elderly subjects, and their hypometabolic status is reflected throughout the entire physiology—not only in the fat stores, but also in the central nervous system, myocardium, kidneys and liver.[11] The effect of a decrease in food intake and metabolic rate in experimental animals has been correlated with the physiologic process of aging and life span. Overfeeding results in a shortened life span, while a certain degree of undernutrition prolongs it.

Projection of these concepts into human nutrition has allowed for the conclusion that the proper balance of food intake has a strong in-

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fluence on life expectancy and the development of certain disease states.[12]

Nutritional concepts are subject to wide variation. The dietary is affected by geographic influences, seasonal differences, economic strata, racial, or individual preferences, and by restrictive effects related to the presence of disease states, faulty dentition, allergies and food fetishes. In addition, the net nutrient effect of the diet depends not only upon the intake, but also on the integrity of the intestinal absorptive surface. The diminished digestive enzyme productions in senescence contributes to the presence of a smaller range of tolerance in intestinal absorption. Consequently, malabsorptive states may result from seemingly insignificant causes in the older person.

Surveys of national food intake show that the averages are in excess of the requirements and that, in general, fat and salt usage is above optimum levels. The most recent figures on average weights of Americans have been released by the Society of Actuaries, and indicate some rather interesting facts—most significantly that there are very few, very fat, very old people around.

It is universally accepted that the main problem in geriatric human nutrition is to improve nutrition before old age is reached, so that physiologic aging is delayed. Highly significant in this respect is the need for prevention or treatment of obesity and hypercholesterolemia. Briefly, the diet should contain fewer calories, less fat and more protein.

The process of aging in the digestive tract, exclusive of the presence of disease, is associated with surprisingly few degenerative anatomic effects—far fewer, for example, than in the skeletal, endocrine or muscular systems. The production of saliva and gastric acid is reduced as age increases, so that about one-third of individuals in their sixties have no free hydrochloric acid in their resting stomach secretion. When both the true and apparent anacidities are considered, approximately one-half will have no free acid on gastric analysis. Anacidity as such, however, does not produce symptoms and does not affect digestion. Under these conditions, the stomach empties somewhat more rapidly, but the oral administration of hydrochloric acid does not alter this effect.[14] Pepsin, trypsin and lipase production is similarly diminished. Digestive and absorptive defects may be expected from these and other secretory deficits, particularly vitamin B_{12}, iron, ascorbic acid and protein. Functional integrity diminishes with aging, but the morphologic changes are minimal. The histologic appearance of the aged intestinal tract is differentiated with difficulty, if at all, from the mature adult.[15] It may be possible, however, to recognize submucosal arteriolar involvement when a generalized arteriosclerotic process exists, so that only by the presence of a preponderance of lymphoid tissue in the immature subject, or by the possible stigmata of vascular sclerosis in the elderly, can the microscopist differentiate a histologic section of intestinal tissue.

Mucosal atrophy, particularly in the stomach, may be noted not infrequently, but probably represents a disease state rather than an expected event in normal aging.

A decrease in endocrine function is part of the aging phenomenon. Adrenal cortical insufficiency, for instance, may account for impairment of fat and carbohydrate absorption by causing a decreased phosphorylation of these substances in the intestinal mucosa.[14]

The occurrence of several common gastrointestinal disorders is related, however, to the localized, or generalized, effects of muscular atrophy incident to advancing age. When intestinal or somatic muscular tone and efficiency are reduced through aging, the physiologic intraluminal pressures exerted during the digestive and excretory processes may produce various symptom complexes. Constipation, the formation of diverticula and herniations are examples of this mechanism.

Acquired diverticula of the gastrointestinal tract are protrusions of the bowel wall which lack a muscular layer. They may appear at any level from the esophagus to the rectum, and are especially numerous in areas of high

intraluminal pressures. The frequency of their occurrence increases with age. In most instances, the condition is asymptomatic; although occasionally esophageal diverticula, and frequently a Meckel's diverticulum, may cause symptoms.

Hiatal hernia is an instance of just such a result of decompensated internal pressure gradients in the presence of a muscular deficit. The musculature of the diaphragm, so frequently involved in the trophic alterations of senescence, fails to equilibrate the forces between the thoracoabdominal opening and the changing intragastric pressures. This exerts a widening effect on the esophageal hiatus with the cardiac dome of the stomach acting like a dilating bag.

The kyphotic vertebral curve is frequently exaggerated in the presence of senile pulmonary emphysema by the summation of structural compensation and skeletal decline.[13] This postural maladjustment adds to the mechanical factors which enhance the development of diaphragmatic disturbances. Angulation at the hiatus, produced by the tugging of the hernia, causes pressure irritation of the gastric mucous membrane and interference with venous drainage. Slow oozing of blood from mucosal erosion results in an obscure anemia of the iron-loss microcytic type. Massive bleeding from hiatal hernia is a rare event, but an associated peptic ulcer was noted in 7.4% of our patients. The ulcer is more often located in the duodenum, but may occasionally be high on the lesser curvature of the stomach near the hiatus.

Hiatal hernia is one of the most common abnormalities in the gastrointestinal tract in patients over fifty years of age. In our series, comprising two hundred and twenty-three consecutive cases of hiatal hernia, 88.9% were in patients fifty years of age or older and 67.8% were sixty years of age or older. Female patients predominate numerically, 68% to 32% (2.1 to 1). (See Figure One.)

Clinically, the presence of a diaphragmatic hernia is associated with heartburn in seventy-five percent of all cases and is, in fact, the commonest cause of this symptom.[9] Suggestive features in the history which lead to the suspicion of hiatal hernia, in addition to pyrosis, are low substernal pain coming on in the first hour after a meal, and made worse by reclining, stooping, straining or lifting. An anemia develops in ten to twenty percent of individuals with hiatal hernia which may be due to the previously mentioned pressure effects on the gastric mucous membrane.

Because of the prevalence of degenerative vascular changes in persons in this age group, it is easily understandable that associations and combination of diseases make differential diagnosis important and sometimes difficult.

In two reported series, twenty-five percent and forty percent of patients with angina had an associated hiatal hernia, and in another survey, twenty-eight percent of patients with hiatal hernia had coronary artery disease.[4, 8] Occasionally, a large hiatal hernia filled with air may become trapped above the diaphragm. This causes a painful attack which closely mimics a myocardial infarction, with its characteristic severe crushing substernal pain, tachycardia, sweating and cyanosis. Cardiac neurosis may frequently be associated with aerophagia which causes a complexity of epigastric and thoracic symptoms including cardiac arrhythmias. Thus a cycle is initiated which worsens the cardiac anxiety and may even induce an anginal attack through the mechanics of tachycardia.

Slightly more than fifteen percent of patients with gall bladder disease have hiatal hernia. The occurrence of these two diseases with diverticulosis coli is observed sufficiently often to warrant the eponym of "Saint's Triad."

Diverticulosis

Diverticulosis of the colon is another age-linked gastrointestinal disorder which is rarely seen before the fifth decade. It is estimated that five to ten percent of the total population have diverticulosis, of whom one-fifth will probably suffer from diverticulitis, and one-quarter of them may require survery.[1] Over ninety-eight percent of our two hundred cases occurred in people forty years of age or older,

FIGURE 1 HIATAL HERNIA

223 CASES

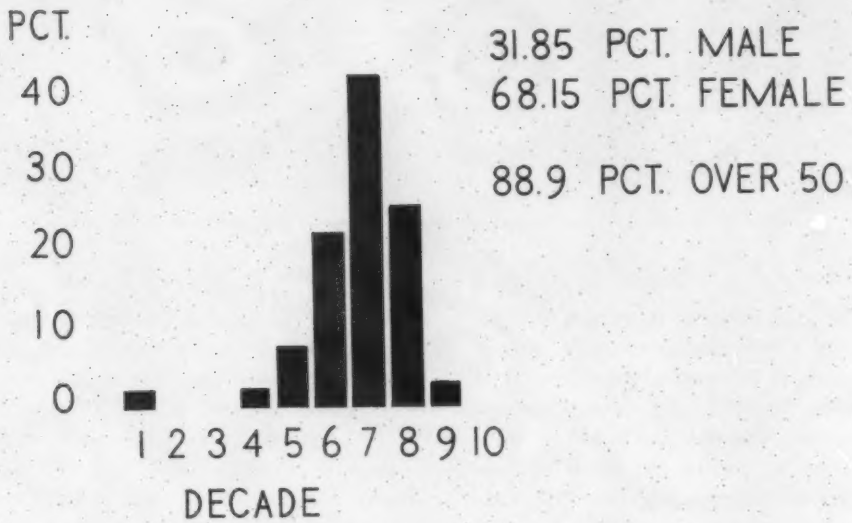


FIGURE 2 DIVERTICULOSIS

200 CASES

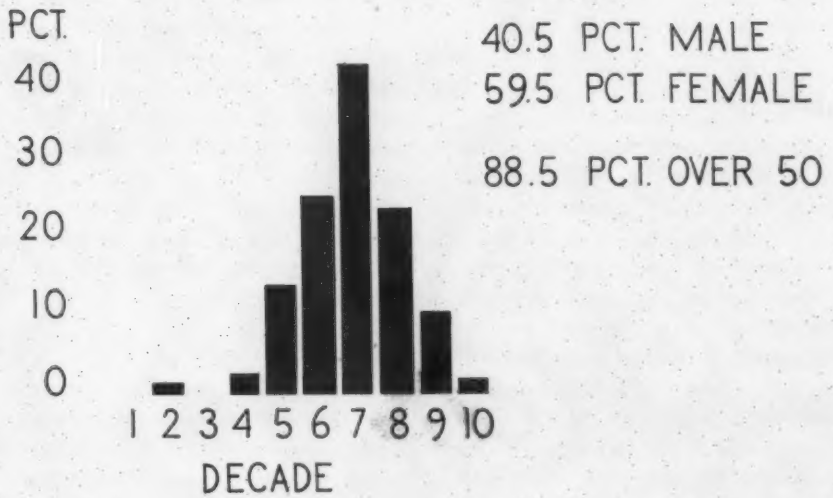


TABLE 1 DIVERTICULITIS COLI
(Age Incidence and Complications)

Decade	1	2	3	4	5	6	7	8	9	10	Total
Abscess						3	1	4		1	9
Hemorrhage					1		2	9	1		13
Perforation				1	2	4	9	2	1		19
Solitary *(Cecal)*				7	1	1					9
Rectosigmoid *(Only)*	1			3	4	12	12	10	3		45
Misc.	2	2		7	17	47	49	42	18		184
Total	3	2	0	18	25	67	73	67	23	1	279

and 88.5% were in the sixth decade or over. These subjects were inpatients in a general hospital and were collected consecutively. The mucosal outpouchings develop through hiatuses in the muscle where the vessels extend from subserosa into the mucosa, as a result of intraluminal pressures overcoming intestinal muscular atrophy or atony. The higher distal colonic pressures account for their greater incidence in the lower left colon. Diverticulosis *per se* is generally only potentially symptomatic; although, it is estimated that some disturbance in bowel habit is associated in about eighty-five percent of patients, the greater number being constipated. When abdominal symptoms result from the presence of diverticula, it is presumed than an inflammatory process has occurred in or adjacent to the diverticula (Figure 2).

Diverticulitis

The most common cause of pain in the left lower abdominal quadrant in individuals past forty years of age is acute diverticulitis coli.[7] In our series of four hundred and seventy-six patients, two hundred and seventy-nine were reviewed according to the complications of hemorrhage, abscess formation and perforation. Of this group, 3.3% had a peridiverticular abscess, 4.8% presented with hemorrhage and 7% perforated (Figure 3). In our series, 17.1% were limited to the rectosigmoid area alone, whereas 68.4% were diffuse in their distribution throughout the colon, but were uncomplicated by perforation, abscess or significant bleeding. The highest age incidence was in the seventh decade (27.1%) and 91.4% occurred in the fifth decade or older.

Because of the clinical features of acute diverticulitis coli, with fever, pain, localized tenderness, muscle guarding and leukocyte response, it has been referred to as "left-sided appendicitis." When it occurs in the right side of the colon, as it did in nine of these patients, the erroneous diagnosis of acute appendicitis is understandable. Seven of these nine patients were in their thirties, and all were found to have a solitary cecal diverticulum involved with an acute inflammatory reaction (Table 1).

In the remainder of the cases of acute diverticulitis, two hundred and seven were arranged on the graph according to sex and age only. Again, the seventh decade leads the incidence, being represented by 36.8% of the total number. 87.5% are fifty years of age or older, and 67.2% are sixty years of age or above. The sex ratio is almost identical with the three to two female to male incidence noted in the group of people with diverticulosis mentioned earlier.

Peptic Ulcer

It is generally considered that peptic ulcer is a disease most frequently appearing in the middle years of life, but is a fact that a considerable number of patients taken from a hos-

FIGURE 3 DIVERTICULITIS

207 CASES

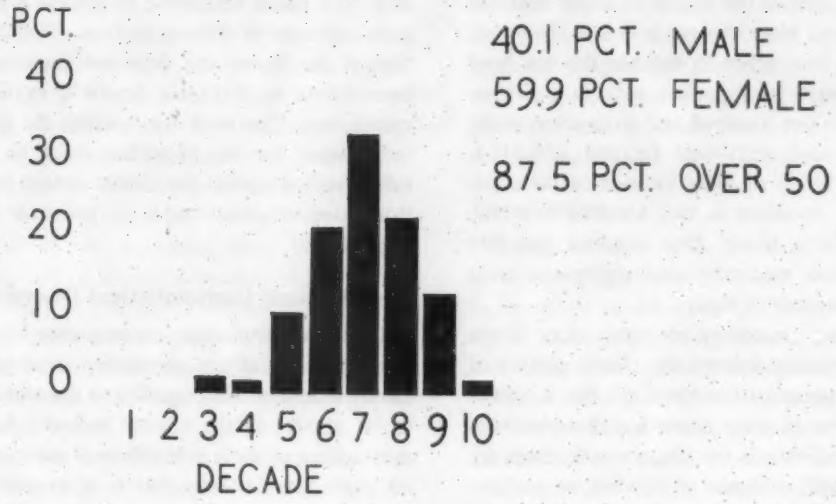
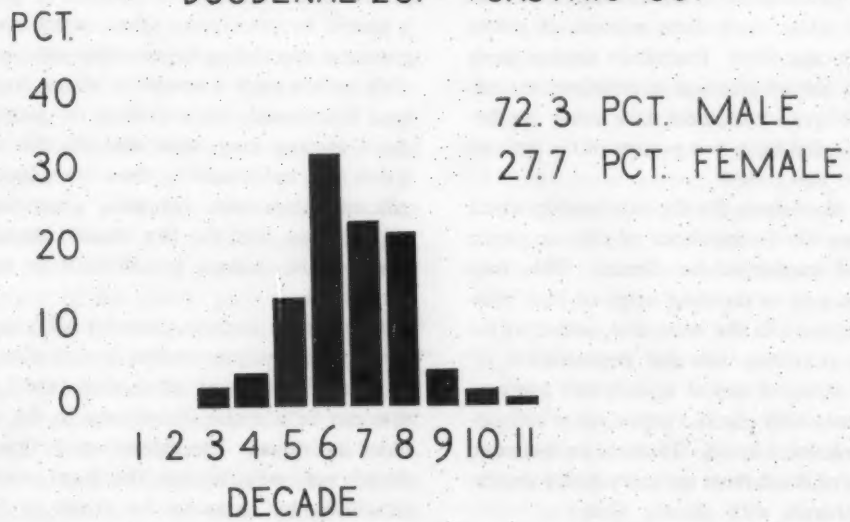


FIGURE 4 PEPTIC ULCER

231 CASES

DUODENAL-201 GASTRIC-30



pital series are in an older age group.[2] In two hundred and thirty-one consecutive patients who had peptic ulcer and were admitted to the hospital, 73.6% were fifty years of age or older. This is not meant to imply that onset of peptic ulcer disease is a late-life event, of course, but rather to indicate the age level of the hospitalized patient with this disease. There were one hundred and sixty-seven males (73.8%) and sixty-four females (26.2%). The distribution of ulcer location in these patients was duodenal in two hundred and one, and gastric in thirty. One hundred and fifty were treated medically and eighty-one were treated surgically (Figure 4).

The symptomatology of peptic ulcer in the elderly generally follows the classic pattern of pain and potential for bleeding, but a significant number of silent ulcers are also observed. In these individuals the diagnostic features are masked, until evidence of bleeding or perforation is present.[17] In a study of sixty-two patients with peptic ulcer past age sixty, (average age seventy-two) Friedman reported hematemesis or melena in forty-eight percent.[3] Massive hemorrhage from peptic ulcer is fifteen times more frequent in patients over age seventy than it was in the decade prior to 1932. Hoffman, who reported this observation, stated that seventy-five percent of five hundred cases of acute gastrointestinal hemorrhage were due to peptic ulcer, forty-three percent of whom were over age fifty.[2] Fraenkel's similar study produced almost identical conclusions regarding the frequency of ulcer as a cause for hematemesis, but forty-two percent of his patients were over age sixty.[6]

There is evidence for the relationship which exists between the incidence of chronic peptic ulcer and cardiovascular disease. This may be due in part to the long usage of high saturated fat intake in the ulcer diet, added to the naturally occurring vascular degeneration incident to aging. Forty of seventy-two consecutive patients with chronic peptic ulcer had elevated cholesterol levels. There is an increased incidence of death from coronary artery disease among patients with chronic ulcer.[5]

These associated phenomena affect certain criteria of management of hematemesis in the older individual. Delay in surgical intervention when a sclerotic vessel is the source of bleeding may be a cause for failure to control a potentially salvageable disease process. If stabilization of the hematocrit does not occur within twenty-four to thirty-six hours, operation is mandatory. The need for "getting the patient into shape" for the procedure must be carefully weighed against the almost certain fatality through exsanguination, if no action is taken surgically.[6]

Drug-Induced Gastrointestinal Disorders

Gastrointestinal disorders may arise from the use of certain drugs commonly employed in the treatment of other age-linked diseases likely to be present in the elderly patient. An understanding of these side-effects is necessary in all patients, of course, but is of especial importance when dealing with the older individual and his narrower compensating mechanisms and reserves.

Rauwolfia, in frequent use in the management of mild hypertension, is perhaps the best tolerated of all antitensor preparations in the elderly. However, even this drug causes an increase in gastrointestinal activity and occasional troublesome diarrhea. Rauwolfia and its purified alkaloids have been shown to produce a gastric hypersecretory effect, which can aggravate a preexisting hyperacidity state or possibly induce such a condition where none existed beforehand. Ulceration of the gastroduodenal mucosa may occur through this mechanism and, unfortunately, there are seldom significantly impressive symptoms accompanying the ulcer so that the first clinical manifestation may be melena, hematemesis or sudden perforation.

Pentolinium tartrate (Ansolysen®), another antihypertensive preparation, is very often productive of a type of obstipating bowel stasis that can be a major disturbance in the atonic older individual. The colonic stasis thus produced not only injures the local anatomic structures, but accounts for errors in dosage

of the antitensor drug, and may lead to toxic accumulative effects.

A controversy exists in some areas concerning the ulcerogenic effects of the clinical use of steroid therapy. Gray demonstrated a corticotrophin-gastric relationship in his laboratory animals when he was able to produce an increase in acid, pepsin and chloride following ACTH administration. The incidence of peptic ulcer in several large series of patients under treatment with adrenal steroids approximates seven percent, but has been reported as high as 17.5% depending upon the duration and dosage of steroid administered.[16] The use of steroids in senescence carries the additional risk of gastroduodenal ulceration without the classic warning symptoms of pain and pyrosis. Generally the same diagnostic criteria of gastroduodenal ulcers are applicable in the older patient, but are much less pronounced than in the younger individual. "Steroid ulcers," as are those related to reserpine, are notoriously silent, with diminished or absent classic symptomatology.

Broad-spectrum antibiotics can and often do cause diarrhea, and sometimes allow for the overabundance of yeast forms in the gastrointestinal tract. When minimal or subclinical absorptive defects exist in the older patient, a drug-induced diarrhea may disturb the fine balance of compensation and eventuate in an overt malabsorption pattern.

Digitalis preparations are indispensable in a medical practice, but both the drug and the condition for which it is most often used, congestive heart failure, can cause gastrointestinal symptoms.

Salicylates, phenylbutazone and most antirheumatic analgesics have ulcerogenic qualities which must be closely controlled or avoided altogether in the elderly patient with known or suspected gastrointestinal disease.

Anticholinergics play an important role in therapy of digestive disorders, but their use in the aged patient must be carefully controlled because of the prominent side-effects. Prostatism as an associated finding makes the use of anticholinergics and other antispasmodics somewhat risky because of the danger of urinary retention.[10]

The presence of glaucoma, either fully developed or incipient, presents an actual contraindication to the use of antispasmodics or anticholinergics because of their mydriatic effects. It is estimated that one person in forty over age forty has undiagnosed compensated glaucoma and an increasing ocular tension is seldom attended by very striking symptoms.

Constipation

Faulty elimination in the elderly is usually the result of indiscriminate use of medication in an effort to overcome an improper bowel habit. Inadequate fluid intake, lack of exercise and inattention to the normally occurring defecation reflex contribute largely to the development of habits which produce the familiar sequence of symptoms.

Constipation in the older individual is too often rationalized by the belief that intestinal motility is diminished as part of the generalized muscular atrophy incident to the aging process. Certain pathologic disturbances in intestinal absorption, the development of colonic diverticuli or chronic inflammation in the digestive tract or accessory organs of digestion compound the defect. Faulty dentition and improper diet are possible additional aggravating factors in this common problem.

Multiple pregnancies, diastasis recti and the presence of rectocoele or cystocoele, when added to natural anatomic structural weakness in the pelvic diaphragm of the female, accounts in a large part for the preponderance of constipation among women.

Atrophic changes in the intestinal tract musculature are less important than hypotonicity in the abdominal wall as causes for irregular elimination in the healthy elderly person.

Constipation should not be considered an expected event in the natural physiologic processes of aging. When errors in habit or hygiene are absent, and no disease state exists otherwise to account for the development of this condition, it does not occur in the healthy older person.

Summary

1. The digestive tract undergoes very few morphologic changes with aging, although there are extensive functional differences such as in the volume of secretion of gastric acid and enzymes.

2. The tone of the supporting musculature weakens in advanced years so that mechanical effects produce various diseases common to the senescent gastrointestinal tract—diverticula, hiatal hernia and constipation.

3. Nutritional requirements are altered in the elderly—they need fewer calories, more iron, ascorbic acid and protein.

4. Peptic ulcer is a disease with an onset in the earlier years of maturity but which characteristically produces its complications in the later years—seventy-five percent of the hospital admissions for this disorder are patients fifty years of age or older.

5. Degenerative vascular changes that occur with aging may be an associated condition, or may complicate an existing gastrointestinal disease and affect the management of it, particularly in the presence of hemorrhage.

6. In outlining a therapeutic program for the older patient, the choice of drug must derive from a careful allowance for potentially harmful side-effects peculiar to the upper age groups.

References

1. Reider, R. A., Sullivan, J. F. and Mack, R. E.: Geriatrics, 13:790 (Dec.) 1958.

2. Hoffman, E.: J. Am. Geriatrics Soc. 6:324 (April) 1958.

3. Friedman, A. I.: Am. J. Gastroenterology, 31:15-22 (Jan.) 1959.

4. Palmer, E. D.: Am. J. Digest. Dis. 3:45 (Jan.) 1958.

5. Sandweiss, D. J., Sugerman, M. H. and Kaufman, J. M.: Harper Hosp. Bull. 17:2 (Jan.) 1959.

6. Fraenkel, G. J. and Truelove, S. C.: J. Am. Geriatrics Soc. 4:415 (May) 1956.

7. Texter, E. C. and Barborka, C. J.: Med. Clin. N. Am. 239-247 (Jan.) 1956.

8. Welch, C. E., Allen, A. W. and Donaldson, G. A.: N. England J. Med. 252-921 (June) 1955.

9. Bockus, H.: Postgrad. Med. 26:185 (Aug.) 1959.

10. Schlosberg, S. S.: J. Am. Geriatrics Soc. 5:511 (April) 1957.

11. Groen, J. J.: Geriatrics, 14:318-331 (May) 1959.

12. Stare, F. J.: J. Am. Geriatrics Soc. 4:744-780 (Aug.) 1956.

13. Freeman, J. T.: J.A.M.A. 165:843 (Oct.) 1957.

14. Sodeman, W. A.: "Pathologic Physiology"—Saunders—Phila. Second Edition, 559, 1956.

15. Morgan, D. R.: Personal Communication.

16. Kammerer, W. H., Freeberger, R. H. and Rivelis, A. L.: Arthr. and Rheum. 1:122 (April) 1958.

17. Cutler, C. W., Jr.: S. G. and O. 107:23-30, 1958.

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WHAT'S THE DOCTOR'S NAME

Identify this famous physician from clues in the brief biography.

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A CASE REPORT

Lymphosarcoma of the Skull

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True osteolytic lesions of the skull are uncommon and those caused by lymphosarcoma are decidedly rare. Recently, we had the opportunity of observing such a patient. After weighing all of the clinical data, the diagnosis of lymphosarcoma was seriously considered. However, the confirmation of this clinical impression necessitated a biopsy of the skull.

CASE REPORT: A seventy-year-old white housewife was admitted to the hospital, because of bilateral leg edema and a fading generalized macular-papular eruption of three weeks duration, associated with an indurated supra-pubic edematous lesion. In addition the patient had noted extreme weakness, loss of weight, and anorexia. Prior to admission she had been treated with Mercuhydrin® and ACTH, which had led to a moderate decrease of the leg edema, disappearance of the macular-papular eruption and the supra-pubic angioneurotic lesion. There was no history of heart disease, or allergy.

PHYSICAL EXAMINATION disclosed a pale woman who appeared chronically ill. The liver extended to two fingers-breadth below the costal margin and was smooth and firm. The spleen was enlarged to three fingers-breadth below the costal margin. Lymphadenopathy was not present. In the supra-pubic area, the skin was tense and brawny but the angioneurotic edema and macular-papular eruption had apparently receded. Moderate pitting edema of both legs still persisted. Otherwise the examination was normal.

LABORATORY DATA consisted of a hemoglobin of 8 grams % and a hematocrit of 28. There were 5100 white cells with a differential count of 2% stab forms, 65% polys (segmented), and 33% lymph. The platelets numbered 300,000 and the bleeding and clotting times were within normal limits. The prothrombin time was 76% of normal. An elevated reticulocyte count of 5% was present. The urine analysis gave a negative test for bile, but urobilin was present in 1-40 dilutions. The blood urea nitrogen was 10mg. per 100cc. and the total serum protein was 6.1 grams with the albumin 3.9 and the globulin 2.2 grams. Serum bilirubin measured 0.72 mg. percent. The alkaline phosphatase, cephalin flocculation and thymol turbidity were within normal limits. The serum calcium was 10.5 mg. per 100ml and the phosphates were 3.8 mg. The uric acid was 5.5 mg. Bence-Jones protein was not present in the urine. The tuberculin skin reaction was negative. The indirect Coomb's test was negative, and the red cell fragility was within normal limits. Venous pressure and circulation time were normal.

ROENTGEN STUDIES of the chest showed an

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MULTIPLE MYELOMA.



LYMPHOSARCOMA.



METASTATIC CARCINOMA FROM THE BREAST.

enlarged heart with pulmonary congestion. The entire gastrointestinal tract was entirely normal and nothing abnormal was noted in the film after the intravenous pyelogram. The presence of a moderately enlarged liver and spleen were noted on these films. The skeletal survey disclosed generalized reabsorption of the bone substance in the vertebrae, ribs, pelvis, shoulder girdles and upper and lower extremities. Translucent areas were seen above the articular surface of the eleventh and twelfth dorsal vertebra, as well as in the medullary portion of the upper end of the right femur. The skull showed "many ovoid translucent areas in the bones of the vault. No reaction zones are demonstrable, and the translucent areas appear sharp."

Despite a transfusion of 1000cc. of whole blood, no change in the hemoglobin was noted and the repeat reticulocyte count was 7%. Consequently the presence of a hemolytic process was considered likely. Sternal marrow aspiration showed an active marrow with an increase in erythrogenesis. The myeloid series were essentially normal and megakaryocytes were adequate. Plasma cells were not increased. No malignant cells were seen. The prevailing opinion was that the skull film could be consistent with multiple plasmocytoma but that a lymphosarcoma seemed more likely. Therefore, a direct biopsy of a lytic skull lesion was performed as well as an aspiration from the same area. The pathological diagnosis was "lymphosarcoma involving the skull" and the aspiration studies showed cells of a "lymphocytic type representing lymphosarcoma cells." The patient was discharged on steroid therapy to which she reacted favorably for several months.

Nine months following the initial admission, the patient was readmitted because of weakness and bone pain of four months duration. She apparently had grown progressively worse in spite of a transfusion of 1000cc. of blood three weeks prior to this admission and an increase of the prednisone to 60 mgms. daily. The transfusion had been given because of progressive anemia. The patient claimed that

subsequent to the transfusion she broke out with showers of petechiae on her arms, legs, breasts and the rest of her body. Her weakness had progressed to the point where she was unable to stand without falling. She was admitted to the hospital to receive a course of nitrogen mustard therapy.

On examination, showers of petechiae were seen on the skin of her arms, legs, breasts and face. There were no enlarged lymph nodes. The spleen was palpable six fingers-breadth below the left costal margin and was non-tender. The consistency was firm and the edge was sharp and the surface was smooth. The liver extended five fingers-breadth below the right costal margin and it also was smooth with a sharp edge and non-tender. No other masses were palpable in the abdomen, and no fluid was present.

The urine analysis showed a specific gravity of 1.020 with a faint trace of glucose. The sediment was negative, except for uric acid crystals. The hemoglobin was 5.5 grams, and the red blood cell count was 1,470,000. The white blood count was 5,500. On differential there were 19 stabs., 23 segs., 2 eos., 50 lymphs., and 5 monos. No platelets were seen on the smear of the peripheral blood. One week prior to admission, the platelet count had been 70,000. The total protein was now 5.4 grams percent, with an albumin of 4.1, and a globulin of 1.3. The fasting blood glucose and urea N were within normal limits. The serum bilirubin was 0.7 direct, and 2.2 total. Several days later, it was 1.35 direct and 2.5 total. The alkaline phosphatase were 15.4 units, and several days later rose to 20. The cephalin flocculation was now 3+, and the thymol turbidity was 10 units. The uric acid was 3.2. The prothrombin time was 70% of normal. During this hospital admission, the highest hemoglobin was 8 grams with a hematocrit of 23. The white blood count fell to a low of 1,600. The bleeding time was eight minutes; the coagulation time three minutes. The reticulocyte count was 3.4%, and the Coomb's Test was negative.

A bone marrow puncture produced a very dilute marrow. No megakaryocytes were seen in two separate sternal aspirations. No red blood cells or precursors or white blood precursors were found, except for a few leucocytes. Ninety-eight percent of the cells consisted of a large, young, uniform appearing lymphocytic cell. The pathological study of the bone marrow was reported as a marrow consisting mainly of cells of the lymphoblastic series consistent with the diagnosis of lymphosarcoma.

Roentgen studies were interpreted as showing a disseminated osteolytic process throughout the bones of the calvarium. Intermingled areas of sclerosis were now also seen. A suspicious osteolytic area was possibly present at the fifth lumbar vertebra.

The anticipated course of nitrogen mustard therapy was not given because of the dilute marrow and thrombocytopenia, and instead intravenous ACTH therapy was initiated. Packed red cell transfusions were given over a period of several days, and at the same time 80 mgms. of ACTH was given intravenously daily; with this the condition seemed slightly improved. However, new petechiae continued to appear and nasal bleeding continued. On the nineteenth hospital day, the patient seemed very pale and dyspneic, and later that day became comatose. All reflexes were absent. The patient expired early the next morning.

Permission for autopsy was not obtained but it was thought that the primary cause of death was cerebral bleeding.

The skull lesions in this patient did not produce symptoms, and were only discovered during the roentgen survey of the skeleton. Dresser and Spencer[1] observed that such destructive lesions of the skull did not give rise to symptoms, whereas vertebral involvement usually gives rise to pain.

The similarity of these lesions to those of multiple myeloma is evident upon comparison of roentgen studies of the skull. There are no radiologic criteria to differentiate these two conditions with certainty. Only when the bone lesions perforate the subcutaneous tissue does a clinical differentiation become possible. In

such rare cases, the palpable plasmocytomas are soft tumors; the lymphosarcomas are firm and hard.[2] However, as in the case presented, this differentiation was not possible, since there was no subcutaneous tumor. Furthermore, the sternal marrow aspirations were unrevealing initially, and the diagnosis could not be certain until a direct biopsy of a skull lesion was obtained.

A similar roentgen appearance of the skull may occasionally be seen in metastatic carcinoma, and in osteomalacia. The latter disease has become extremely rare in this area, and is only seen as complication of steatorrhea. However, metastatic disease of the skull occurs frequently, and of these a small percentage may present as purely osteolytic lesions. It is often mentioned[3] that no bone lesions are found below the elbow or the knee in Hodgkin's disease or lymphosarcoma, whereas in metastatic malignancy this limitation does not exist. This empiric finding is generally true, but its practical value is questionable because of the numerous exceptions which are known to occur.

The skeletal lesions of Hodgkin's disease and lymphosarcoma are quite similar, and again there are no radiologic criteria to differentiate these. Statistically, lymphosarcoma is more frequently osteolytic, but as in Hodgkin's disease, both osteolytic and osteoblastic defects may occur simultaneously. Rarely in lymphosarcoma are pure osteoblastic lesions found. Vieta, Friedell, and Craver[5] reported eighty-five percent of the skeletal lesions in lymphosarcoma were purely osteolytic. In Hodgkin's disease, only thirty-four percent of the lesions were lytic. In the same group of patients, fifty-eight percent of those having Hodgkin's disease showed both lytic and osteoblastic skeletal lesions, but of the entire group only two patients with lymphosarcoma had involvement of the skull. None of the thirty-eight patients who had skeletal lesions of Hodgkin's disease showed any skull involvement.

Steiner[4] reported that skeletal lesions are twice as common in Hodgkin's disease as in lymphosarcoma. He found bone lesions present in only twenty-four out of the two hundred and sixty-nine patients who had Hodgkin's disease; an incidence of 8.9%. Dresser and Spencer[1] observed eleven percent incidence in their sixty-six cases of Hodgkin's disease. They further state, "we have observed only destructive changes in the bones of the skull. The areas are usually circular with sharply defined margins."

In 1934, Craver and Copeland[5] reported bone involvement in seventeen out of one hundred and sixty-four patients who had lymphosarcoma, an incidence of 10.4%.

Pathological reports usually give a higher incidence of bone involvement found at autopsy, and therefore such autopsy statistics must be distinguished from radiological diagnosis made during life. Generally, the bone lesions occur earlier in lymphosarcoma and, when the skeleton shows involvement in lymphosarcoma, the life expectancy is reduced as compared to the later occuring involvement in Hodgkin's disease.

Summary

A case-record of lymphosarcoma has been presented in which there were extensive multiple destructive lesions of the skull without any osteoblastic reaction.

These lesions do not give rise to symptoms and will only be found if the examiner is aware of their occurrence, and requests a roentgen study of the skull.

The similarity of these lesions to multiple myeloma, metastatic carcinoma, Hodgkin's disease and osteomalacia is outlined, and the diagnosis is discussed. The necessity for a direct bone biopsy is evident.

It is striking that different observers have reported that, in eight to eleven percent of the cases of lymphomas studied, skeletal lesions are present, of which however only a minor percentage involve the skull.

Bibliography

1. Dresser, Richard and Spencer, Jack: Hodgkin's Disease and Allied Conditions of Bone, Amer. J. Roent. 36:809-15, 1936.

2. Snapper, I.: Bone Diseases in Medical Practice, 147-152, Grune and Stratton, New York and London, 1957.

3. Vieta, J. O., Friedel, H. J. and Craver, L. F.: Survey of Hodgkin's Disease and Lymphosarcoma in Bone, Radiology, 39:1-16, 1942.

4. Steiner, Paul E.: Hodgkin's Disease, Arch. Path. 36:627-37, 1943.

5. Craver, Lloyd F. and Copeland, M. M.: Lymphosarcoma in Bone, Arch. Surg. 28:809-18, 1934.

Changes in Bone in Hodgkin's Granuloma, Arch. Surg. 28:1064-86, 1934.

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DYSPHAGIA AND HYPERTROPHIC SPURRING OF THE CERVICAL SPINE

A bony mass arising from the cervical spine can cause dysphagia. Three such cases are reported, 1 of which was successfully treated by surgical excision of the osteophyte. The literature on hypertrophic spurring of the cervical spine as a cause of dysphagia is briefly discussed.

Patients with dysphagia should be carefully examined for osteophytes of the cervical spine. Mere presence of these does not mean that they are the cause of the dysphagia. The patient must be carefully evaluated to establish a cause-and-effect relation. Surgical excision of the osteophyte is indicated when symptoms are severe enough to warrant such a major procedure.

Peroral endoscopy is hazardous in patients with cervical hypertrophic spurring. Pre-endoscopic roentgenograms are indicated to rule out this condition. One should exercise special care in using endoscopy for the diagnosis of dysphagia with spurs of the cervical spine.

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The Revolutionary History of CORONARY ARTERY

Coronary artery disease is a complex subject. Certain aspects of the disease are well understood while other areas have been neglected. Each important step in progress has required a revolution in the thinking before it was accepted. Nowhere in medicine are there so many misconceptions that need correction. Nowhere has there been such fierce opposition to making corrections.

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The first revolution in the history of coronary artery disease occurred when the seat of the disease was discovered to be in the heart and not in the stomach. This was brought about in this country by Herrick of Chicago, in 1912. The delay in making this discovery is difficult for us to rationalize at the present time, because necropsy examinations of victims of this disease were done previous to that period and one would expect correct correlation between symptomalogy and morbid anatomy to have been made at a much earlier period. Several correct correlations were made earlier but these did not change the general medical attitude. Even at that later date, acceptance of the discovery involved controversy, simply because it was necessary to change one's mind about the disease.

The second revolution occurred right after the first. The string galvanometer was in existence. It was known that the heart produced electrical currents and these could be recorded by this instrument. It was then discovered that these recordings had clinical application. This discovery brought on a revolution. Special skill was required to interpret these tracings. A new speciality and a new specialist were created. Both were placed on a high and even mysterious level of achievement. This concentration of effort was so great that other aspects of coronary artery disease were neglected. The late Dr. George Crile remarked to the writer that "the medical cardiologist allowed the electrocardiogram to do his thinking for him." Knowledge concerning the disease was out of balance and this created opportunity for the third revolution which at the present time can be identified with considerable clarity and understanding.

It began in 1932 when the writer, a surgeon with no electrocardiographic background, began to investigate the disease in the experimental laboratory. The disease was recognized as being important. The direct approach to the coronary arteries was used. Learning was based on

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DISEASE

observation and there were no assumptions that had to be changed later by experience. A hidden asset was the absence of contact with authority. The motivation was treatment of the disease.

Looking forward from that date, it was not possible to identify the defects in existing knowledge nor was it possible to predict accomplishments before they were made. Looking backward, the minus and plus signs can be identified with considerable clarity and understanding. The following items are on the debit side of the record:

1. Coronary artery occlusion produced injury to muscle and injury current. One did not occur without the other. An injury current was always accompanied by its counterpart of injury to muscle.

2. The standard for measurement of the effect of vasodilating drugs was injury to muscle. This precluded direct measurement of drug action and these measurements were not achieved.

3. The basis for treatment of the disease was not defined. The difference between generalized anoxia and localized anoxia in heart muscle was not recognized. The value of intercoronary arterial channels was not recognized and no one tried to produce them. The value of additional quantities of blood in the range of cubic centimeters per minute delivered to ischaemic areas of muscle was not recognized.

4. The dog heart could not be defibrillated, unless the ligature was removed from the artery and this is impossible in man. Therefore, it was not possible to reverse fibrillation in the human heart occurring after occlusion of a coronary artery.

The plus signs are as follows:

1. The disease has two components. One is morbid anatomic changes in arteries and muscle. The other is anginal pain and electrical fibrillation. These anatomic changes run their course from beginning to end and little can be accomplished at present by direct surgical intervention on arteries and muscle. Anginal pain and electrical fibrillation yield to treatment.

2. Anginal pain and electrical fibrillation are based on one and the same cause, namely, an unequal (checkerboard) distribution of coronary blood supply. A uniformly anoxic heart is not painful, does not fibrillate and stops in cardiac standstill. Generalized anoxia requires more oxygen. Localized anoxia and angina pectoris require a more uniform distribution of the available blood.

3. Nitroglycerin transports 0.88 cubic centimeters of blood per minute from well-oxygenated areas of myocardium to anoxic areas of myocardium. Drug action lasts about ten minutes. The Beck operation transports five nitroglycerin units and they are permanent.

4. Anginal pain and electrical fibrillation occur without injury to muscle A difference in oxygen tension in two adjacent areas of muscle produces electricity. Well-oxygenated (arterial) blood delivered to a branch of a coronary artery of an anoxic heart produces fibrillation. Arterial blood cannot produce injury. This destroys the concept of injury as the mechanism for electrical fibrillation.

5. Electrical fibrillation, unencumbered by injury, clarifies death after a clean bill of health. It explains death in a heart that is structurally good. The clinician sorely needs this information.

6. The electrical death factor is mobile; it can be moved around. It can be reversed in a good heart by timely intervention. It can be brought on in a good heart by such activity as shoveling snow. It can be prevented or

delayed in a good heart by the Beck operation.

7. The first human heart was shocked out of fibrillation by the writer. This occurred in 1947. The first fatal heart attack occurring in the pursuit of life was reversed by the writer. This was done in 1955. At present, the fatal heart attack was reversed in ten victims in University Hospitals, Cleveland, and the number of successes is increasing elsewhere. A survey of victims of fatal heart attacks occurring outside the hospital shows that six or seven out of every ten had no new disease in arteries or muscle. Under proper conditions these deaths could have been reversed. The hospital cases had recent occlusion and recent damage and reversal was possible. This indicates the magnitude of reversal in coronary artery disease.

These experiences indicate that the fatal heart attack is not necessarily the end of life depending upon what is done at the moment of death. They indicate also that death often occurs in hearts too good to die, that a good heart needs only a second chance to beat.

Discussion

These items on the plus side of the record have encountered fierce opposition. In the past, the opposition had the intent to destroy both the writer and the work. An attempt was made to close his research laboratory. When the dust settles, coronary artery disease will be better understood and it will be better treated. To make a record of this is the author's duty. Society is concerned with the most important cause of needless death, namely, fibrillation in hearts too good to die. History will make favorable comparison between this work and that of William Harvey, Lord Lister and Semmelweis, each of whom fought opposition and, in each instance, time passed for the dust to settle before value was recognized.

References

1. Beck, C. S. and Leighninger, D. S.: The Coronary Patient Wants Better Treatment. Medical Times, January, 1961.
2. Beck, C. S. and Leighninger, D. S.: Death After A Clean Bill of Health. J.A.M.A., 174:117, Sept. 10, 1960.
3. Adelson, L. and Hoffman, W.: Sudden Death from Coronary Artery Disease: Statistical Study, Cuyahoga County Coroner's Office, Cleveland. J.A.M.A. (to be published).
4. Hearts Too Good To Die. Editorial, J.A.M.A. (to be published).

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The Nature of Mental Retardation

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My background is that of a practicing pediatrician, whose instruction in medical schools and hospitals, besides the many infections, included a number of unusual pediatric anomalies, of congenital malformation, of examples of retardation both from birth injury and heredity, and to be alert in the differentiation of a cretin from a mongol. This latter seemed important to my teachers, but their characteristics have become so different as my experience has broadened, that this differential diagnosis seems odd to me now.

I was taught the distinction between an idiot, an imbecile, a low and high grade moron. My teachers taught me nothing about the social treatment of these different classes, except that one should always put such children in an institution, preferably without the mother having seen the child. Propinquity bred attachment, and this should always be avoided. This was my advice to parents when I first went into practice, and still is the advice most physicians give to parents of these children. They are following the direction of such pediatric stalwarts as Brenneman, Holt, Helmholz and others.

As late as March 1959, a study was reported in *Pediatrics* by Koch et al., of the University of Southern California, on the attitude of parents toward the advice given by their physicians. The age of the physicians consulted was not given. I suspect they may have been the older physicians who as reported stated, "Your child is an idiot." "Get him away from the siblings." "He should be in an institution." "You are wasting time that should be spent on the normal children in your family." Not more than half the parents were satisfied with the answers given. The same way with the few who consulted clinics. What they found induced them to put a course in counselling the parents of retarded children into the curriculum of the University of Southern California School of Medicine.

After a few years of practice, I realized that few of my patients took my advice. It was unrealistic. It was the law then, but fortunately now changed in many states, not to take any of these children into a state institution before they were six years of age. Unless the County Hospitals or private custodial institutions took them or they were placed in private homes, they had to stay at home.

What happened to them there? They were generally concealed in some fashion, and success was often rated on how well they were concealed. The parents were afraid of the stigma attached, for retardation was regarded as a sign of "bad blood" in the family. This rejection of the child of course extended to the siblings. Other children also can be cruel, and when a neighbor's children learned the situation, these siblings were taunted about their "idiot" sister or brother.

During the past ten years, this has changed,

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but the situation even today is not perfect. Indeed, with me it changed about twenty-five years ago. I began urging these parents to keep their children at home for at least their early years, and I followed this with counsel. I told them that heredity was rarely a factor, and love to these children was even more important than to normal children. I also told them their situation could happen to anyone—rich, poor, educated, skilled, unskilled, or any race. Besides this, a normal home life in early years prepared them for an institution. The result was that I was referred the children of other physicians. They did not wish them anyway. So from that experience, and from the fact that I was on the local Advisory Board of the National Association for Retarded Children, and on the board of a local school for the retarded, I am experienced enough to talk on this subject. But, as I said, the great change started about ten years ago with the formation of the N.A.R.C., with later state and local associations.

Now the children are not hidden, and now most parents of retarded children are not afraid to admit it. This is a tremendous change. You can all remember when no one would admit insanity, cancer, epilepsy, cerebral palsy had occurred in their family. Not so now with any of these.

Why has this been so long in coming? Dr. Arthur J. Lesser, consultant in this field with the National Children's Bureau in 1958, says this: "As public health explores the future, it tends to discover certain groups that had been forgotten. The mentally retarded belong to one of these. . . . Until recently the mentally retarded child was indeed the forgotten child. . . . The primary force (for understanding mental retardation) is the parents of retarded children." This group, the National Association for Retarded Children, is not only interested in local care but in more and better institutions for them. Also the area of prevention of retardation has interested the Federal Government so that through the Children's Bureau over three million dollars is annually allocated for research, and others have more than matched that by contributions from private sources.

What is mental retardation? Herman Yannett, the director of the Southbury (Conn.) School for the Retarded, in a discussion of this subject, in 1959, says that "intelligence is not the result of a single mental process, but is made up of many different abilities, including abstract thinking, visual and auditory memory, causal reasoning, verbal expression, manipulative capacities, spatial comprehension and probably many others." This multiple concept has been implied in the development of mental testing since Binet, about seventy years ago, first devised his tests. These tests, and many others similar in character, have been added to, modified, and otherwise altered in the time since, but essentially they are the ratio of the mental to the chronological age. But it was clear then and more clear now that inadequate mental development is only rarely manifest equally in all spheres. It is the case that psychologic examinations must be conducted on these multiple factors and be interpreted in terms of future social adaptability, rather than on an estimate of the average mental age.

But for academic and administrative purposes, says Dr. Yannett, the I.Q. is useful. Retardation is generally classified as follows:

(a) I.Q. 51-75 — educable
(b) I.Q. 21-50 — retrainable
(c) I.Q. 0.20 — low grade

The educable mentally retarded may be trained to adjust himself to the economic and social life with which he is surrounded. Though he cannot compete on equal terms for economic survival, he can adjust and modestly compete. Many in this group are able almost entirely to make a living, and in the higher brackets, i.e., 60-75 I.Q., may be completely self-sufficient. The trainable child can be taught to eat acceptably, to dress himself and to take care of his toilet needs. I have seen many in the upper limit in this group who can handle a job under supervision, or who can help at home under supervision. The low grade retarded should, at least after a few years, be put in a custodial institution.

The number of retarded is not accurately known. A few counties in the United States have been surveyed, and using these as analogies, some estimate of their number has been made. The general consensus is that approximately three percent of the population is affected; i.e., three percent have an I.Q. of seventy-five percent or less. An interesting graph was published in Florida Health Notes, of March 1958, an organ of the State Welfare Department. They do not state their authority, though it appears to be approximately correct (See Chart I).

In Connecticut, Roselle, in 1955, made the following estimates. Per 100,000 population there were the following number of retarded:

Mild — 500-700, i.e. sixty to sixty-five percent
Moderate — 225-325, i.e. thirty percent
Severe — 75-110, i.e. ten percent

This is about one percent of the total population which are affected. If one estimates the *school* population of the retarded, it is about three times this much in that group, for attendance at school very often makes the diagnosis. One is surprised to learn that parents don't know or admit retardation until told by the teacher. Of course, many forms of retardation do not really appear much before school age.

A comparison in an N.A.R.C. publication is made with some other major afflictions. Per 100,000 of *school age* there are:

Blind	35
Paralytic poliomyelitis	128
Cerebral palsy	350
Heart disease cripples (includes congenital heart disease)	1750
Mental retardation	2500

This can only be an approximation, since some blind are retarded, and the majority of cerebral palsy patients are retarded.

What is the *longevity* of the retarded? This has never been even estimated, except for a few of the rarer types, e.g., amaurotic idiocy (18± months), Mongolism (35± years). It is influenced by the antibiotics which save a great many; by better care in institutions which saves a great many more. A relevant study was

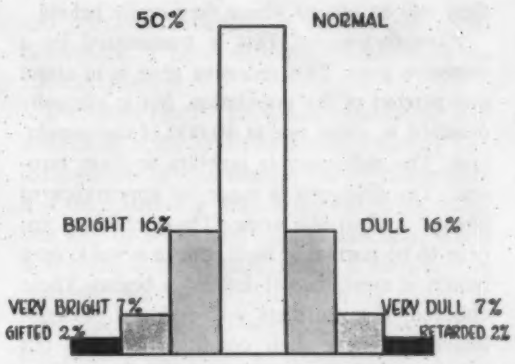


CHART I This chart shows the percentages of Florida children who are bright as compared with those who are retarded.

conducted by Schlesinger on cerebral palsy patients and published in 1959. The expectancy for males is that if one takes one thousand normal males at five years of age, at age forty-five, there will be nine hundred and thirty-three surviving; with females there would be nine hundred and sixty-four still alive. But in cerebral palsy, if one takes one thousand of these at five-years-of-age, at age forty-five, only one hundred and fifty-nine would be left of the males; of the females only three hundred and eighty-eight would be alive at age forty-five. He had the impression that the more severe the palsy the higher the mortality.

The usual *clinical classification* of causes of mental retardation is to divide it into three parts: prenatal, natal and post-natal. This I will follow only mentioning illustrations in each group, and those with which I have had personal experience. I will not mention all I have seen, because doing so would only lengthen this paper and would not contribute to its clarity.

The prenatal afflictions are of many sorts, but with the exception of Mongolism their total is very small. It might be well to subdivide this array of cases into those that begin or are manifest during the first two or three months of gestation and are probably inherent, and those that are manifest after this period and are probably not inherent at all. Research may well upset this classification, and they

then will be placed where they really belong.

Phenylketonuria: This is transmitted by a recessive gene. This recessive gene is in about one percent of the population, but is clinically manifest in about one in 40,000 of the population. The deficiency is inability to form tyrosine. The diagnosis is made by appearance of phenyl acid in the urine. These children appear to be normal at birth, but in a week, or a month at most, mental deficiency begins. These children, if given diets with reduced phenylalanine can have their condition arrested but not improved. Described first in 1934, I have seen only four instances of this condition.

Galactosemia, another rare disease which afflicts an apparently normal newborn, is also inherited as a recessive trait. I have seen three of these patients. Symptoms begin with the ingestion of milk. The trouble is the absence of an enzyme which reduces milk in a process converting lactose (in milk) to glucose and galactose. The latter is what causes symptoms. At first, retardation in growth is seen with mental retardation. Treatment is of course to avoid milk or any other lactose-containing foods, of which there are a few. Treatment here, as in the preceding disease, would have to be started soon after symptoms started.

I have seen a couple of instances of gargoylism, another condition due to a recessive gene. No one knows the cause of this condition, which also has marked mental retardation. The child is a dwarf, with large ears and lips, a broad and flat nose, and other characteristics. Recently, it has been shown that the tissues of these patients show large vacuoles which contain an acid mucopolysaccharide. These have also been isolated from the urine. Their significance, other than that they help in making a diagnosis, is not known. The material of these vacuoles is fundamental in the building of connective tissue of the body, but far more than the connective tissue is involved. Treatment is not specific.

Craniosyntosis begins in early life and until recently was called simply *microcephalus* with mental retardation. This child exhibits a premature closing of the sutures of the skull, which then cannot enlarge with growth. This I have recognized three times in the last two years of my practice. Retardation can be cured if early in life artificial sutures can be created surgically. Treatment early, produces excellent results.

Amaurotic familial idiocy generally is fatal at about the eighteenth month. Aaronson writes a summary on this condition in the August 1960 number, of *Pediatrics*. I probably have seen a dozen of these. When Sacks first described the condition sixty years ago, he thought it confined to the Jewish race, but about twenty-five years ago in the face of evidence he admitted it could occur in other races, and it certainly does. In the dozen cases I have seen, however, all were Jewish. An apparently normal child is born, but about the third month failure to gain in weight is evident. Loss of appetite and complete flaccidity, mental retardation, rapidly bring on death. It is caused by a recessive gene.

The reason I mention hypertelorism is that this also is associated with retardation and is also associated with a recessive gene. But the degree here seems to be the important issue. The eyes are widely set and the nose is flat and flaring. Many of these have a normal mentality. I remember but a couple of these patients who were retarded.

Calcifications within the brain associated with a recessive gene occur and can produce mental deterioration. They are spoken of here because they are often familial. Melchior, et al., sums up the story of these calcifications in the March 1960 issue of the *American Journal of Diseases of Children,* reporting many that have shown progressive mental deterioration. But they are rare. I have seen only a couple in practice.

Progressive muscular dystrophy can be associated with mental retardation, but such relation is rare. Of the two dozen patients, more or less, that I have seen, only one was retarded. This is a disease associated with wasting muscular power, but with a seeming enlargement in the muscles made by deposition of fats, especially of the calf muscles. This disease generally does not appear until the child is

three or four years of age. Allen reports thirty patients with this disease in the August 1960 issue of the *American Journal of Diseases of Children*. He says half his patients were retarded. He does not give the ages, and since ninety-five percent of my practice was under twelve years of age, that may account for the disparity. The disease seems to be due to a recessive gene. He does point out that the retardation incidence could be due to the emotional handicap involved.

These conditions that I have described are all associated with a recessive gene either on the part of the ovum or the sperm, and are present before their union. They are but examples of the hereditary type of retardation. I have mentioned but a few of these, and they are illustrative, and there are many more, but put all of them together and they account for relatively few cases of retardation.

I will now give a few illustrations of retardation which are initiated during uterine life that occur where there is no impairment of either the sperm or the egg at the time of union. There is no sense in being categorical about this, because as more is known they may be allocated elsewhere. This may well be true of *autism*. Chapman, in the June 1960 issue of the *American Journal of Diseases of Children*, reviews this subject. He thinks these children, even as early as four months of age, show the symptoms. They are apathetic, unresponsive and show a great preoccupation with inanimate objects. As age increases, they can show remarkable memory for arrangements in a room, on a street; can repeat long literary selections; but have little comprehension of their meaning.

These individuals may develop schizophrenia, which I shall only refer to because it generally does not exist in the younger child. Indeed, autism has been described as infantile schizophrenia. But the schizophrenia goes on to delusions and hallucinations. Both of these conditions may be the result of gene alteration, but they are not so regarded. Psychiatric help is needed, but of little avail in autism. Eisenburg followed sixty-three to adulthood and only three developed satisfactory social adjustment. I have only recognized three as autistic children.

Cretinism results in mental retardation and sometimes is the result of a malformation, i.e., the absence of the thyroid gland. Sometimes it is the result of a fibrous thyroid gland made that way by some intra-uterine infection. When it appears in more than one in a family, it is probably due to the family lacking iodine in their diet. I used to see it fairly frequently, but since iodized salt is commonplace I can recall but one retarded cretin in the past ten years. Iodine is the specific these children are given, but it fails many times, probably in those cases where it is an anomaly and other conditions modify the situation. Such a factor as a thyroid that will not assimilate the iodine may be the cause. Why some are helped a lot and others not at all is not often really known. These children look normal enough at birth, but in a few months begin to show heavy eyelids, large tongue, coarse hair, small stature and marked retardation.

Toxoplasmosis in the mother may affect the child's brain either by tumors in the brain or a meningitis. This begins at the third or fourth month of gestation, causing retardation. It is a rare disease. It has been most frequently seen in the Ohio River valley. I have recognized but one. The same is true of *Syphilis*. This I also used to see, but since the advent of penicillin I have not recognized a case, i.e., one that caused retardation. *German Measles*, an otherwise inocuous disease in the mother, affects the fetus often even to retardation when it is contracted during the first ten weeks of pregnancy. The same can be the result of x-ray when used on a pregnant woman who may not know she is pregnant. I have seen both occur, one instance each.

Kernicterus is almost always an accompaniment of severe and prolonged jaundice in the newborn. At first, now about ten years ago, this was thought to be a complication of Rh incompatibility in the two parents, and damage usually began a few months before delivery of the newborn. It is more often than

not accentuated by *prematurity*. As this severe complication has been studied (about forty percent of those that live are retarded), it has been found it can occur with other blood incompatibilities, and in fact when from some other and unknown cause there is deep jaundice. This is not uncommon and, during the latter years of my practice, I saw at least six retarded children. Again, I might add that *prematurity* always contributes to its severity.

We have discussed the children affected by retardation which begins sometimes in the ovum and, at times, in the sperm, but before they unite in conception. We discussed those retarded children whose retardation began after the union of ovum and sperm, and before delivery of the child. In all, they amount to but a proportionate few of the retarded.

Now I wish to discuss Mongolism which, until the last three years, was thought to be a condition that began in the first five or six weeks of gestation. There was nothing to link it to preconception. But recently (1958), Masland writes there may be a genetic factor, probably coming from the mother. This is not due to the fact that the family tree displays mongols, the family of mongols rarely have any more in their forebears than chance would allot to them. But it is due to the finding of an extra chromosome in the ovum, and this may point to heredity through the mother. This was reported by a French investigator three years ago and has since been corroborated. To show how unsure we were of the cause of Mongolism, Joseph Narkany four years ago gave thirty-nine different theories about its cause. The victim is flaccid, has small genitalia, flat nose, characteristic slant eyes and furrowed hands, always smiling, almost never crying. For the first few months, he may have difficulty in swallowing because of the small nasopharynx and rather large tongue. It is recognizable at birth. Mongols resemble one another closely, looking always like siblings.

It is difficult not to enlarge on the characteristics of the mongol child, because they are so common, comprising about twenty percent of all retarded in institutions, according to Masland, but some more data are significant. They generally are born to mothers over forty years of age. Mongols used to die early of pneumonia, to which they are prone. This is not so any more because of antibiotics, probably, but they do have a premature ageing, generally becoming senile at thirty-five and dying around forty. In April of this year, Seigfreid made the observation that theirs is the one type of retardation that increases as they grow older. Others disagree with this, but I am inclinded to agree. Another dissimilarity with other forms of retardation is the great difference in their I.Q. I have seen some measured at 10 I.Q. and others at 80 I.Q. Siegfreid again calls attention to the facts that mongols should be kept at home. These happy children literally thrive on love, reacting well not only physically but mentally. If and when they do go to an institution, it should not be until their teens.

Another large group of retarded children can easily be grouped together. They are perfectly normal children until the period of delivery, and are labeled "birth injury." The fault may lie in the fact that they have to be delivered by Caesarean; that the umbilical cord is wrapped around the child's neck; that the birth canal is too small; that the mother has been given a drug to quiet her, but it has reacted adversely on the child; that resuscitation was not promptly or properly carried out; or that the anesthesia was too deep; and many other causes. In reality, partial asphyxiation or anoxia occurs.

The result may be an actual break in the skull, though this is rare now because of better obstetrical practices. Much more often it is an anoxia, i.e., the child does not breathe before some blood vessel within the central nervous system breaks and hemorrhage occurs; or a vessel may be edematous and swollen, not allowing the blood to flow through; or a clot may occur occluding the vessel; or any combination of these events. The commoner sites of such trouble are the cerebellum, then the mid-brain at the areas involving respiration, cardiac control, speech control or that part in-

volving the movements of the extremities. It is this latter group that results in many of the cerebral palsies. The hemorrhage into the cerebellum usually results in ataxia; that in the mid-brain causing athetolis. Another site that may be involved is the area above the cerebrum and is called "subdural hematoma." This results in a clot of blood above the brain, and if it is not removed can cause anything that such pressure can cause—retardation, epilepsy, palsy, etc. It is diagnosable and can be surgically treated. The only thing needed beside diagnostic and technical acumen is haste. If removed soon enough, a perfect result usually follows.

After birth there are chiefly two kinds of disease that can cause retardation. The first is encephalitis, and in most instances the cause of the encephalitis is unknown, especially if it occurs in the first two years of life. Many of these are fatal, but many are not, and when they live they nearly always result in retardation. The usual picture in very young children is high fever with convulsions, and one doesn't know the trouble until retardation begins. Most are viral and not specifically treatable. In older children, measles, mumps and chicken pox may cause encephalitis. So also can vaccination. So can syphilis and toxoplasmosis.

The other great post-natal cause of retardation is meningitis; the greatest offender is meningococcal meningitis; then influenzal and tuberculous meningitis; then pneumococcal, and then streptococcal. These used to be fatal but all are now treated with antibiotics, and these children can be saved. But with tuberculous meningitis and the others as well, the result is very frequent and often very severe retardation.

I have said little or nothing of treatment, except where the child can be benefited by some treatment, either specifically by antibiotic, or dietary measures, or symptomatically by such additions as the hormones, the tranquilizers, the anticonvulsants and surgery. Treatment really belongs in the field of specialists, or the psychiatrist, or the psychologist.

A few months ago, I listened to a paper read in Tampa by Marian Tannhauser, a special education teacher from Maryland, and her thesis intrigued me. She said the usual way to teach these retarded children is to subdivide them into educable, trainable and severely retarded children, and to teach them according to that place the I.Q. had assigned them. Miss Tannhauser's subject was, "How Normal Is a Retarded Child." Her opinion was that our present teaching is outmoded; that mental retardation is not the problem, but the result of many problems. The classifications we use do not reflect the cause of the problem at all. She illustrated: a child with 20/20 vision is unable to coordinate eye-hand movements, i.e., it cannot copy visual patterns. The more it is urged to do this, the more reluctant it becomes. If we work at this long enough, it becomes psychologically impossible. Our "education" compounds their difficulties, and they are classified as subnormal children, having a given I.Q. Another example: a 20/20 vision child cannot give meaning to what he sees. Such children have "nerve blindness." Stationary objects create strain and restlessness and transmit no meaning. In our efforts to increase their powers of concentration, we confuse them and they too are given an I.Q. which has no meaning. Good intentions can ruin the child; they could and often do make children less and less normal. Mental retardation has no meaning unless it alerts us to discover the basic physiological difference between "normal" and "abnormal."

She referred to a reprint put out by The Dr. Julian D. Levinson Research Foundation, in which there were five lectures by Dr. Lise Gellner of England, who conducts temporarily in Chicago a school for teachers in her method of approach in teaching retarded children. She is at The Levinson Foundation now teaching teachers and training children, and her papers were published in 1959. Dr. Gellner is a physician, a neurophysiologist, who uses neurological terms readily understood by a psychiatrist, a physiologist, or a neurologist, and are difficult to translate into language easily understood by any other physician.

Her thesis is first that you would not attempt to teach a blind person to see, or a deaf person to hear. You would make your diagnosis of blindness and proceed to teach him, not by means of training him to see but by substitute methods. The same thing is true of a deaf person. So in so-called retardation, the problem foremost is to make a correct diagnosis, determining the injured parts of the brain. These children would be separated, not according to an I.Q., which is now done, but according to the diagnosis of injured parts. She has no use for an I.Q. as such, for it leads to confusion of the teacher, and frustration, even harm, to the child. Again and again she says, "There is no such thing as a general lack of mental ability."

Clarification of her ideas is best made by a short summary of some of her illustrations, Psychologists speak of "motor aphasia," a condition where a child can copy words, can whistle or hum, but he cannot speak. This is not uncommon. He has a complete or a partial block to or from the speech centre. It is as organic as deafness. He can understand certain words and they have meaning, but no others. Trying to give him a general speech vocabulary ruins it all. He "clams up." Teach him to communicate by writing or even by using a typewriter, and his life opens up. Don't attempt the physiologically impossible.

Another and common example is what psychologists term "cerebral agenisis." Because of destruction of the paths to or from the visual center, the child may see only moving objects, or he may see only stationary objects. That is the way he has been left by some disease, and Dr. Gellner mentions kernicterus, phenylpyruvic oligophrenia, etc. If the correct diagnosis has not been made and treatment instituted without that clearly in mind, the result is utter frustration and so-called "amentia" is the diagnosis by any physician.

Again, another child cannot match blocks but can colors. Attempts to correct this result in his being "retarded." Some children's memory cannot be increased by repetition, and again, because of an organic structural defect. To insist on repetition will make him worse. The underlying principle is: "Never present a child with problems incomprehensible to him. Find a way to teach him through avenues that he can comprehend."

Auditory handicaps are attacked in similar fashion. A block in the incoming or outgoing fibres produces what psychologists term "sensory aphasia." Such children repeat what is said to them, such as Mother Goose rhymes or a question asked them, but the words have no meaning. They don't understand and become withdrawn, living in a world of their own. Kanner would call them "autistic" and Mildred Kreak "childhood schizophrenia." But it is known that they may reach a high level in reading and arithmetic.

Dr. Gellner emphasizes that the newer concept of retardation is not retardation at all. It is based on a neurological diagnosis of blocking of pathways, primarily visual and auditory. The other senses, as touch, sterognosis, smell and pain are secondary. Misdirected education can and will make them worse. With proper direction, and in proper grouping, these children may be able, with a knowledge of their disability, to lead a normal life. One to two years in a special school will be all they need. What we call retardation may be treated, according to Dr. Gellner, with the same proficiency that is now accorded the blind and the deaf child. You should know her theories have not received general acceptance.

I can understand the points she is making, and to me many are obvious. For many children with brain injuries it could be the correct approach. Brain injuries produce a great share of our retarded. Such injuries are not necessarily traumatic, as I have said; they can be due to toxins, anoxia, bacteria, viruses and other agents. But how her theories could apply to mongols, cretins, amaurotic idiocy, gargoylism, etc. I do not know.

In the September 17, 1960 issue of *The Journal of the American Medical Association* is an article by Doman et al., regarding the orthopedic difficulties of the brain-injured child. He uses much the same approach as Lise

Gellner and reports in his two-year study on seventy-six children much better results than those obtained by the conventional method. He promises a later report on the results in such areas as language, or that area of which we are speaking.

Summary

Retardation is a major health problem. It can now be talked about. Some retarded children are made so by a gene within either the sperm or the egg; others by intra-uterine infections or by means or methods we do not yet understand. But these are numerically few. The greater number are caused by birth injuries, and by diseases that are manifest after birth. The conventional teaching of these children by the use of the I.Q. test is being questioned. Time may soon teach us the proper approach. Today, it is the case that by research into the prevention, and by investigation of proper treatment, retardation may well be made less, and those that are afflicted may be habilitated for a better life.

May I paraphrase part of Stanley High's article in the September 1960 issue of the Reader's Digest. There is abundant evidence that the old era of defeatism is giving way to hope. Ten years ago, no college trained teachers were engaged in the teaching of these children. Now two hundred are. Ten years ago, there was no diagnostic clinics for these children. Now there are seventy-five. In the 1950 White House Conference, the subject was not discussed. In 1960 it was the third most important. So now we can say, with the National Association for Retarded Children, that retarded children can be helped.

888 South Orange Avenue

VIRUS INOCULATION

Seven volunteers were inoculated with Coe virus obtained direct from man, and four volunteers received virus passed twice in human amnion-cell cultures. Ten volunteers became infected as judged by recovery of virus, and 11 developed illnesses resembling the common cold. Infection occurred in spite of the presence of circulating antibody in two volunteers, and an antibody rise was detected in only two volunteers.

R. Parsons, B.Sc., M. L. Bynoe, M.B., M. S. Pereira, M.B., and D. A. J. Tyrrell, M.D.
Brit. Med. J. (1960), No. 5188, Pp. 1776-1777.

A New Topical Medication

ACNE THERAPY

In recent years, the pharmaceutical industry has placed on the market a large number of preparations for the treatment of acne, almost all of them based on the time-honored formulas containing sulfur and resorcin, as recommended by our dermatologic forefathers. In addition, many of these medications contain a corticosteroid, an antibiotic, or a special peeling agent. Most, if not all, of these have found a place in the dermatologist's armamentarium for acne.

There has also been a gratifying effort by the pharmaceutical industry to make these preparations more cosmetically-acceptable to patients of acne age. However, no one compound has been a "cure-all," nor has any one proven the most acceptable (and therefore cheerfully applied), or most efficacious for all patients.

STEPHEN F. HORNE, M.D.
Rocky Mount, North Carolina

The necessity for individualized acne therapy creates the reason for additional new products. While the treatment of acne is based on well-established principles, it must be tailored to fit the needs of the individual patient. Tracne,®* the subject of this report, has proven useful in many patients with acne and has become the first recommendation in two groups—the younger and older patients.

This is a cream base composed of an emulsifier, mineral oil and a wax. The one hundred and twenty-eight patients who have used this preparation, some as long as eight months, have shown no evidence that it contains acnegenic materials; that is, there has been no increase in follicular plugging.

The active ingredients are resorcinol monoacetate, colloidal sulfur and N-trichloromethylmercapto-4-cyclohexene-1, 2-dicarboximide hereafter referred to as TR-100. The time-honored use of sulfur and resorcin needs no comment.

TR-100 is a fine white powder which has been studied for eight years.[1-3] It completely inhibits growth of M. pyogenes, aureus and albus, in a dilution of 25PPM. It is active both in solution and as a discrete particle. Toxicological studies have shown TR-100 to be a very safe chemical for use by humans. Systemic and local effects are negligible. Since 1951, TR-100 has been widely used in a

* Supplied by Table Rock Laboratories, Inc., Greenville, South Carolina.

number of commercial applications with a multiplicity of exposures, resulting in no significant complications or toxic reactions.

In this study, one hundred and twenty-eight white patients with all grades of acne were treated by substituting Tracne for previously used medications on one side of the involved areas.

There were thirty-eight males and ninety females in the group and their ages varied from eight to forty-three.

In sixty or sixty-six percent of the females and in twenty or fifty-three percent of the males, Tracne was superior to medications previously used. It was compared with lotions and creams containing sulfur and resorcin and in some instances, also a corticosteroid. In seventeen of the patients, there was a mild to moderate seborrheic dermatitis which cleared within two weeks after Tracne therapy was started.

Five patients with seborrheic dermatitis failed to improve on this therapy.

In one patient, there was erythema after one week of use.

By patch tests, this was traced to the TR-100, resulting in a cutaneous reaction rate of less than one percent.

A careful review of the records of these patients reveals that the compound is cosmetically acceptable except in patients with very oily skin who will be maintained dry only by a more drying type of preparation. The cream can be rubbed into the skin so that it is invisible and therefore acceptable to males. It lends itself well as a powder base for day use among females and has almost always been cosmetically acceptable to them.

This formulation of sulfur, resorcin and TR-100 must be said to be a relatively non-drying cream. I think it is for this reason that the compound has been most effective in the younger and older patient with acne and for post acne treatment.

It must be emphasized, however, that neither Tracne nor any other topical medication replaces the necessity for other modes of management of the patient with acne. These include proper diet, adequate acne surgery, ultraviolet light, x-ray therapy, antibiotics or sulfonamide therapy and dermabrasion.

Summary

One hundred and twenty-eight patients with acne have been treated with a paired-comparison technique with a new combination of resorcinol monoacetate, colloidal sulfur and TR-100 (Tracne®). This compound was more effective in sixty-six percent of the females and fifty-three percent of the males than several other frequently recommended preparations. It is particularly useful in the younger and older patient with acne and, within the time of eight months, appears to be useful for post acne therapy.

Bibliography

1. Kittleson, A. R.: A New Class of Fungicides, Science, 115:82, 1952.

2. Kittleson, A. R.: Preparation and Some Properties of N-trichloromethylthio-Tetrahydrophthalimide, J. Agr. and Food Chem., 1:677, 1953.

3. Ball, F. I.: A New Treatment for Seborrheic Dermatitis, A.M.A. Arch. Derm., 71:696, 1955.

356 Main Street

Clinical Pathological Conference

HARTFORD HOSPITAL, Hartford, Conn.

JOHN C. LEONARD, M.D., *Discussant,* is director of medical education at Hartford Hospital.

AVERILL A. LIEBOW, M.D., *Pathologist,* is professor of pathology at Yale University.

This 50-year-old white female housewife was admitted to the New Haven Hospital for the first time on September 28.

Chief Complaint: Shortness of breath of 2 weeks' duration; anemia.

Present Illness: One to two months before admission the patient had noticed that her abdomen began to swell, although this caused her no discomfort. Two to three weeks before admission she had experienced increasing exertional dyspnea with occasional paroxysmal nocturnal dyspnea and ankle edema. She had had 2-pillow orthopnea for two years. For two to three days before admission she had had postprandial vomiting without nausea. The vomitus consisted of ingested food without evidence of blood. She complained of nocturnal pruritus for three weeks before admission.

Past History: Noncontributory.

Family History: Noncontributory.

There had been no recent weight loss. She had experienced a rash over the arms and chest of a macular type for two or three years. Four years previously she had been seen by a doctor for a minor complaint and at that time was found to be anemic and "run down." During the previous winter she was noted to have a "puffy" face. During the past year, and especially in the past six months, she had been troubled with diarrhea, at times so severe that she had been incontinent of feces.

Temperature was 99 to 100; respirations 28; blood pressure 160/95. This was a swarthy woman appearing chronically and moderately acutely ill. She was somewhat dyspneic.

Skin: There was no evidence of jaundice. Numerous small "scabs" and excoriations from scratching were present over the back, chest and arms. *Head, ears, nose:* Negatives. *Eyes:* Pupils were equal. The sclerae were clear. There was slight exophthalmos, without staring. The vessels of the fundi were thin and faint. *Mouth:* The upper incisors were infected. The lowers were absent. The tongue was poorly papillated, with flat areas at the periphery and in the center.

Throat: Moderate postnasal drip. *Neck:* The thyroid was slightly enlarged, the right lobe greater than the left. No nodules were palpable. The neck veins were distended and filled from above. *Lymph nodes:* Many 1 to 2 cm diameter soft nodules in both axillae. *Thorax:* A-P diameter was increased and the chest cage was relatively fixed with full inspiration.

Lungs: Inspiratory wheezes at the left base, posteriorly and laterally. Clear to percussion. *Heart:* The heart was enlarged to the left an-

terior axillary line with the apex in the 6th interspace. There was a Grade II systolic murmur, heard best at the apex. The rhythm was regular with frequent extrasystoles. *Back:* No CVA tenderness. *Breast:* No masses palpable.

Abdomen: The abdomen was very protuberant with a 2 cm diameter umbilical hernia, easily reducible. A mass, thought to be a greatly enlarged liver, extended into the pelvis on the right. It was non-tender with a hard nodular surface. There was a vague mass in the left flank, without a definite edge and with multiple slightly movable 2 to 4 cm diameter hard nodules over the surface. In the remainder of the abdomen could be felt small, hard, slightly movable nodules, on deep palpation.

Skeletal: No tenderness of the spine or rib cage. *Pelvis:* Not remarkable except for cervical erosions. *Rectal:* No masses palpable. *Extremities:* There was edema of the lower extremities. *Neurological:* Not remarkable.

Hospital Course

She was treated with fluids and blood transfusions, and digitalized. She remained dyspneic but expressed very little concern over her illness. The venous pressure on 9/28 was 252 mm of water, and the circulation time (Decholin) was reported to be 60 sec.; (questionable accuracy). An ECG taken on the same day showed nothing of note. On her fourth hospital day she developed a temperature of 103 and was found to have bronchial breathing, with rales over the right lower lung posteriorly and with dullness at the base.

She was placed on Aureomycin with prompt return of her temperature to normal. Tarry stools were noted on 10/3 and continued throughout the remainder of her hospital stay. On 10/3 she was noted to have generalized anasarca with puffiness of the arms, face and neck. A thoracentesis was performed and 400 cc of slightly cloudy fluid was obtained. On 10/4 she became somewhat confused. On 10/6 she became unresponsive, and on 10/7 she died.

X-Ray

Abdomen: Displacement of duodenum and small intestine toward left. Barium enema: Evidence of extrinsic pressure on lateral aspect of ascending colon. Chest: Density in right lower lung field. Pleurisy with effusion.

Discussion

DR. LEONARD: A middle-aged female of 50 years was admitted to the New Haven Hospital on September 28. Since she died on October 7, she was there under observation and therapy for ten days. Her chief complaint was shortness of breath. For two to three days before admission, she had had postprandial vomiting without hematemesis. She complained of nocturnal pruritus for three weeks before admission. When we think in terms of pruritus, we still should think of scabies, because it is not necessarily a disorder of poor economic circumstances. We should think in terms also of malignant lymphoma, because it is amazing how frequently lymphoma shows up even before nodes or spleen are evident, just on the basis of the symptom, pruritus, and the obvious scratch marks that so many of these people have when they are admitted.

Rash

She had experienced a macular rash over the arms and chest for two to three years. We aren't told this patient's rash, but the late Dr. Francis Blake used to pick us up about once a year on the basis of these rashes, which he would come along and identify immediately as Brill's Disease.

Four years previously she had been seen by a doctor for a minor complaint, and at that time was found to be anemic and "run down." The diagnosis "run down" is a lay diagnosis which is used very often to explain chronic fatigue.

Nine to twelve months before her admission, she was noted to have a puffy face, and our attention should turn immediately to hypoalbuminemia, regardless of what the cause of the hypoalbuminemia might turn out to be.

During the past year she had been troubled

Laboratory Data

BLOOD

	RBC	HGB.	WBC	STAB	LYMPHS	SEG.	HCT.
9/28	2.33	8.7	19,000		15	85	
10/1			10,000				34
10/2	2.86	9.5	10,900	12	9	79	52
10/4			12,150				

BLOOD INDICES 9/30

C.I.	1.017	MCV	108	21
V.I.	1.29	MCH	37	
S.I.	0.82	MCHC	29	

URINE

	REACT.	SP. GR.	ALB.	SUGAR	ACETONE	CASTS, ETC.
9/29	5.5	1.013	1+	0	0	5-10 wbc
9/30		1.005	3+			50-100 wbc; 5-10 rbc
10/6	6.0	1.007	3+			Bacteria: Loaded with wbc & rbc

	NPN	FBS	Na	Cl	CO_2	K
9/29	181	99	128	105.5	5.6	5.6
10/1	180		136.7	93.7	19.0	3.6
10/6	165		114.5	82.0	14.5	

LIVER FUNCTION TESTS 9/30

Bilirubin: Total 1.18; Ceph. Floc. 4+ 4+ Thymol flocculation: 2+
BSP 42.2 Direct 0.68 Urobilinogen: 0.13
Alk. phosphatase 18.5 Thymol turbidity: 8.5

BILE: 0; **PROTHROMBIN TIME:** Control 14 sec. Patient 20 sec. P.T. 44%

STOOL 9/30: Guaiac 3+ **BLOOD CULTURES** 10/2 and 10/3: No growth

THORACENTESIS FLUID 10/3

Specific Gravity 1.013 Culture: Negative
Loaded with wbc Cell Block: No evidence of tumor

with diarrhea, at times so severe that she had been incontinent of feces, so that this was really a severe diarrhea, almost certainly of the water variety. Later on we find that the laboratory gives the evidence of 3+ Guaiac-positive stools.

Her physical examination showed a temperature of 99 to 100 degrees Fahrenheit. The pulse isn't mentioned. Her respirations were elevated to 28, and her blood pressure was 160/95. You always wonder, when you find a blood pressure at this level on admission, whether the patient has previously had a severe hypertension and whether, because of cardiac failure, the pressure has been reduced to this level, or whether she might have been a normotensive individual and her blood pressure was now on the rise.

This was a swarthy woman, and we are always alerted to anything that describes the skin. I don't know whether this swarthiness was racial or whether it was something she

had acquired with her disorder. It is almost certainly not Addison's disease. She was not a diabetic, so we shouldn't think too seriously along the lines of hemochromatosis or hemosiderosis. The sclerae were clear so that there was no jaundice, which almost completely rules out any serious degree of bilirubin elevation.

Stare

There was slight exophthalmos with stare. The vessels of the fundi were thin and faint. Thin vessels might well go with long-standing hypertension, so that probably this patient's blood pressure has been elevated for some time. The faintness may well have been tied in with retinal edema, although no specific mention is made of that. At least there were no hemorrhages and no exudate described.

The upper incisor teeth were infected, and the tongue was poorly papillated, with flat areas at the periphery and in the center. With what we see in the hemogram later, we begin to wonder whether a part of this patient's disorder might be pernicious anemia.

The throat showed moderate postnasal drip, and I think we could almost say that merely means that she was a "normal New Englander."

The thyroid was slightly enlarged, the right lobe greater than the left. This again makes us wonder whether she came from this section of the country, or whether this was a very minor and insignificant finding. No nodules were palpable in the thyroid, so perhaps we can pass over that.

The neck veins were distended and filled from above. She did have definite evidence of congestive failure in this manner and otherwise.

This patient did have, significantly, one to two centimeter soft axillary nodes bilaterally.

Inspiratory wheezes were noted at the left base, posteriorly and laterally. The chest was clear to percussion. The heart was enlarged, and this was confirmed by the x-rays that Dr. Liebow was kind enough to send up in advance. Grade II systolic murmur was heard best at the apex. The rhythm was regular with frequent extrasystoles, and later the statement is made that the ECG was normal.

The abdomen was very protuberant with a two centimeter umbilical hernia, easily reducible. Our good friend, Dr. S. J. Thannhausser, always pays much attention to the appearance of the umbilicus and says that any time you see a pouting umbilicus, you should definitely look carefully for intra-abdominal disease. A mass, thought to be a greatly enlarged liver, extended into the pelvis on the right, so this was no small organ.

A liver that extends into the pelvis, though we do see it occasionally, leads one to think of malignancy with a metastatic liver. It was nontender with a hard nodular surface. We are not told whether this mass that was thought to be liver moved with respiration. It is extremely important to note whether an abdominal mass moves with respiration. There was a vague left flank mass, so we have bilateral masses here. In the x-rays later we see that the mass on the left is also very large. There is no mention of the spleen here.

Mass

This vague mass in the left flank was without a definite edge but did have multiple slightly movable 2-4 cm diameter hard nodules over the surface. It would be very unusual for nodules that were metastatic in the liver to be movable, so perhaps we should pause here and think very carefully over that statement. In the remainder of the abdomen could be felt small, hard, slightly movable nodules on deep palpation. Immediately you wonder whether the mesenteric nodes are also involved—perhaps even the retroperitoneal nodes. There was no skeletal tenderness or pain, and I think probably this is significant.

There was further evidence of her congestive failure in the form of edema of the extremities—or perhaps we should say failure and/or hypoproteninemia.

Neurological examination was not remarkable, despite the fact that this patient did go into coma the last two days of her life.

She was treated with fluids and blood transfusions and was digitalized. She remained dyspneic despite all this, but expressed very little concern over her illness, which is often true of a patient who is so seriously ill that she is either numbed on the sensory side or has been ill for so long that she takes her symptoms for granted. The venous pressure was 252 mm of water, and the circulation time (Decholin) was 60 seconds. An ECG showed nothing of note. Four days later, her temperature was 103.

She had bronchial breathing with rales over the right lower lung posteriorly, with dullness at the base. She was placed on Aureomycin with prompt return of her temperature to normal. Tarry stools were noted on 10/3, which is two days after she was given Aureomycin, and her diarrhea, previously watery and now bloody, continued throughout the remainder of her hospital stay. Four days before her death she was noted to have generalized anasarca, with puffiness of the arms, face and neck, so that what was hypoalbuminemia on admission must have become worse by this time.

Fluid

Thoracentesis was performed, and 400 cc of slightly cloudy fluid was removed from the right pleural cavity. Paracentesis was attempted, but no fluid was obtained. That seems quite strange in view of the films we will show later, because there is tremendous haziness in the x-ray all over the abdomen. Three days before death the patient appeared somewhat confused, and for the last two days of her life she was apparently in coma.

She had a 2.33 million red blood cell count on admission and on 10/2 the count was 2.86 million despite the fact that she probably had a fair number of transfusions, although we do not know the exact number. However, her hematocrit was 34 on admission and 52 just before death so that her anemia was quite corrected, or this may have been caused by dehydration due to diarrhea. Her white count was elevated constantly, and the granulocytes were always markedly elevated. The blood indices would indicate a macrocytosis with some hypochromia. The macrocytosis is not marked enough that I think we have too much right to lean toward pernicious anemia, despite the tongue. Apparently the bone marrow was not examined. I'm not going to think too seriously of pernicious anemia.

Microscopic Findings

The urine was acid on admission. Specific gravity reached only 1.016 with the help of 1+ albuminuria. Albumin was one-to-three plus in the urine, with no sugar and no acetone. Microscopic findings were significant, with white cells, red cells, and bacteria. If it was not a catheterized urine, it doesn't mean anything. I think, the way this is building up, that we should take seriously the white cells, red cells, and bacteria in this patient's urine.

The NPN was markedly elevated despite attempts at fluid restoration. Her fasting blood sugar was normal. Her sodium at first was a little bit low, then was restored by electrolytes, and finally dropped toward the end. Her chlorides at first were normal, but, in keeping with dropping of the sodium indicating kidney disease, she had lowering of her chlorides. Her CO_2 was in the acidotic range at first, was brought toward normal, and then dropped again despite attempts at electrolyte balance. Her potassium was elevated at first and then finally on the low side. We wonder, with a high NPN, whether the potassium shouldn't have been higher than this, but perhaps this patient, who was having marked diarrhea, was losing her sodium and potassium excessively in that manner. I suspect also that she was being given potassium, and that still failed.

Her liver function tests are extremely important. Her total bilirubin was only 1.18, and of that, the direct or immediate reacting portion was 0.68. It is obvious now why she did not have any jaundice despite the fact that her liver function was abnormal. Her BSP was a markedly abnormal 42.2%. Her phosphatase was elevated to 18.5, indicating some extrahepatic obstruction of which we have no

evidence in the normal, or near-normal, bilirubin. Therefore, we have to wonder about intrahepatic or skeletal damage.

We have nothing to go with skeletal disease clinically or in the x-rays. Therefore, we have to bring this back to the liver. The cephalin flocculation is in keeping with that, 4+ after 24 and 48 hours. This indicates for one thing at least a high globulin, and that goes along with a very low albumin, which we have been prophesying. The thymol turbidity is up to 8.5 with an abnormally elevated thymol flocculation, indicating hepatocellular damage. The prothrombin time was somewhat abnormal, being reduced to 44%, which is in keeping with the other abnormalities of liver function.

Guaiac

Here is something important — her stool Guaiac was 3+, and this was before her bloody diarrhea—so, even then, she was losing blood from the GI tract. Blood and chest fluid cultures were negative. We have no indication of malignancy or infection, or, if the latter was there, it had been controlled, as far as the chest was concerned, by the antibiotic. We don't have a serum protein and A/G ratio, but I feel that the albumin must have been very low and perhaps, therefore, the globulin higher than normal. We have no gastric analysis to lead us toward pernicious anemia or gastric carcinoma with metastasis to the liver and nodes. An ESR probably wouldn't help, since we already have an elevated white count and a polynucleosis to go with it.

The large mass which was thought to be liver, pushed the stomach, duodenum, and small bowel to the left side of the abdomen. Apparently there is also a left sided abdominal mass, but we do not know if this could possibly be the spleen. The kidney contours are not recorded the way they usually are in a flat film. A marked diffuse haze is present over the flat film, and that should mean that there is a great deal of fluid in the abdomen. We see no stones or calcification. The heart is enlarged and there is evidence of fluid here, and perhaps infection, but the rest of the lungs are clear. There is no evidence of metastatic disease.

Obviously, this is unlikely to be a carcinoma of the lung, because we don't have enough to go with that picture. There is no doubt about cardiac enlargement and congestive failure. We must feel that here is a retroperitoneal mass, With the multiple systems involved, in spite of the presence or absence of the spleen, one should think of malignant lymphoma. Only a few axillary nodes are present, and this worries one a bit. This patient did have pruritus, but an elevated bilirubin was absent. Abdominal lymphoma may displace normal viscera, and this is not too rare. That might be why no free fluid was ever obtained.

Differential

Here is a patient with congestive failure and uremia. The "scratch marks" on the arms probably account for the axillary nodes. She has evidence of massive renal impairment going on to uremic coma. There is an important syndrome with congestive failure that ends in uremia. We should also keep in mind that people who have that form of renal disease often have terminal infection which accounts for the urinary findings. The diagnosis that would tie it all together is *Congenital Polycystic Kidneys.*

This picture, from an old textbook, shows a massively enlarged polycystic kidney and a smaller one on the left. This patient should have "spider" pelves in her kidneys.

DR. LIEBOW: One of the things that I always enjoy about Dr. Leonard's clinical analyses is that he often corrects the protocol and suggests additional procedures that should have been done but were not done. Very frequently, when the clinical analyst makes a misdiagnosis from a protocol such as this, he gives as a reason that he hasn't seen the patient. In the present instance, the opposite is true, and those who did see the patient were not successful. The x-ray department, however, suggested the correct diagnosis—and also made an alternative diagnosis that the patient

had an intra-abdominal tumor, a lymphoblastoma.

I think it is unfair that Dr. Leonard demonstrates the pathology in this case from an old textbook. The kidneys were somewhat larger than shown in that old volume, and they did extend much lower. The entire substance of both kidneys had been transformed in this manner and when a section was made, and the spiderlike nature of the calyces within the substance of the kidneys is demonstrated.

It is interesting that there are two periods of life when the mortality is relatively high. The first is in early childhood. The second is somewhere in the forties, as a rule. This patient was a little older. Now, why should there be this gap, and what is the mechanism by means of which renal failure finally occurs in these patients?

The neonatal deaths are explained by the totally deformed state of the parenchyma with lack of capacity to function that exists in a few individuals. Here the kidney has the appearance of a sponge; not coarsely cystic as in the present case.

Second Group

In the second group there is less diffuse involvement, but other changes take place. Some of these can be demonstrated in the present instance. At the margin of the cyst is seen a tremendously distorted collecting tubule, in consequence of being stretched on the periphery of the cyst. The very same thing happens to blood vessels. In this way, there is an increase in those factors that tend to destroy the glomerular substance. Arterioles become thick-walled, and their lumina become obliterated as they are stretched. Likewise, as the tubules become stretched on the surface of the cyst, there is ultimately a tendency for atrophy of the proximal nephrons.

The heart was somewhat enlarged, and there was fluid in all the serous cavities. In the liver, a few cysts could be seen grossly. There was a severe degree of passive congestion in the liver, with actual necrosis of parenchymal cells in the pericentral regions.

In addition, there were certain foci of necrosis which had the appearance of infarcts. A few of these were situated near large cysts, and the associated vessels show evidence of thrombosis.

Infarcts of the liver are extremely rare, unless there is a combination of impairment of both sources of afferent blood supply—that is, both the hepatic arteries and the portal veins. In this case, portal veins have become thrombosed. The arterial circulation is impaired by virtue of the heart failure that exists.

The lungs showed severe congestive changes, and there were numerous very small pulmonary emboli.

The bladder was the seat of a severe cystitis. The x-ray diagnosis was *Cystitis Emphysematosum,* meaning by that that gas-forming organisms had actually invaded the wall and produced gas there.

The final diagnosis, then, is *polycystic disease, involving kidneys and liver; congestive heart failure; focal infarcts of the liver and passive congestion.*

DR. LEONARD: These patients are difficult to keep in electrolyte balance. They are always anemic. As one looks back, there is no doubt that when she was seen by a physician four years before and found to be anemic and "run down," the enlarged cystic kidneys should have been felt if an attempt had been made. I think it is entirely justifiable that we stress the examination, because in that manner we would be led to doing an IVP and finding these people early. They could then be given what little protection there is to be given, admitting that it is very slight. At least they can be kept in as normal electrolyte balance as possible.

There is one other point you see mentioned in the literature, and that is that some of these patients can be treated by evacuation of these cysts. That is in the line of wishful thinking. Obviously, this procedure does not increase renal function in these people. Also, 98 percent of these patients have bilateral involvement of the kidneys. About eight or ten cases are reported in which malignancy developed in a polycystic kidney.

GANGLION

A ganglion is a benign subcutaneous cystic lesion which arises from the capsule or surrounding connective tissue of a joint, or from a tendon sheath. It is the most common tumor of the hand, but is seen in other locations as well. The most frequent site is the dorsum of the wrist, overlying the navicular or lunate (Figure 1). A somewhat less common site is the volar surface of the wrist, usually between the brachioradialis and flexor carpi radialis tendons. In this position, it lies very close to the radial artery, a relationship which must be kept in mind at the time of surgery. Other locations are the volar surface of the fingers, often just distal to the metacarpophalangeal joint (where the cyst is usually small and firm), the dorsal and palmar surfaces of the hand (between or on the extensor or long flexor tendons, respectively) (Figure 2), the region of the head of the fibula, the terminal phalanx of the finger or toe (Figure 3), and the dorsum of the foot (Figure 4). It may arise directly from a flexor tendon in the region of a pulley, and give the symptons of a "snapping finger" or "snapping thumb."

Incidence

Ganglia occur more commonly in women than in men in the ratio of about three to one. They generally appear in the second and third decades. Howard has called attention to another type of ganglion arising in later life in patients with arthritis, and often responding to treatment with compound F.

Etiology and Pathogenesis

A history of trauma can be elicited in about a third of cases, and this may be an important factor in causation. There are three theories of pathogenesis. One is herniation at the site of a weak point in the joint capsule or tendon sheath. Another and more recent theory is neoplasia of the synovial lining. The most widely held view is that a ganglion results from degeneration of connective tissue around the joint or tendon sheath, similar to the development of an adventitious bursa.

Pathology

Grossly a ganglion is a thin-walled cyst filled with clear, colorless, viscid, mucoid material, which has the appearance of synovial fluid. It



FIGURE 1 Typical appearance of a ganglion on the dorsal surface of the wrist.



FIGURE 2 Ganglion on the flexor tendon sheath of the distal palm.

may be single or multiloculated, and may vary in size from a pellet of buckshot to a large marble. A thin stalk may extend down to the underlying joint capsule, but there is no communication between the lumen of the cyst and the joint cavity. Histologically, the ganglion wall is composed of layers of collaginous fibrous connective tissues which often contain areas of degenerated collagen. There may be nerve fibers incorporated in the wall and the cyst may be lined with a thin layer of mesothelium.

Ganglia do not undergo malignant change, do not spontaneously rupture through the skin, and unlike bursae, rarely become infected.

Symptoms and Signs

The cyst is usualy first noted by the patient as a smooth, rounded, non-tender subcutaneous swelling in one of the sites mentioned above. It may be very firm or soft and fluctuant. The skin moves over it but the cyst is firmly attached deeply. Motion of the joint over which it lies often makes the ganglion more prominent.

Pain is a common symptom and is characteristically dull and constant, but may become sharp and stabbing with motion of the joint



FIGURE 3 Ganglion or mucoid cyst on the dorsal surface of the distal phalanx of the thumb.

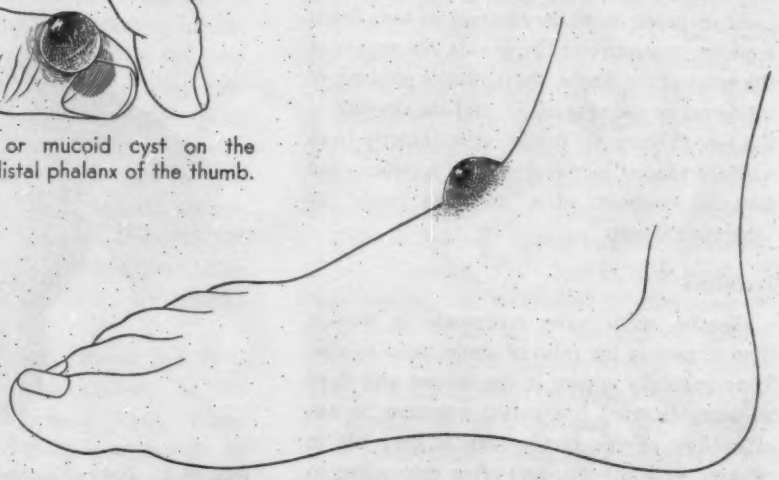


FIGURE 4 Ganglion on the dorsal surface of the foot.

or on direct pressure, especially over a small ganglion in the palm. Patients frequently complain of weakness of grip, and in some cases this has been shown to be due to pressure of the ganglion upon the deep portion of the ulnar nerve at the wrist.

Differential Diagnosis

Lesions from which ganglia must be differentiated are lipoma, xanthoma, epidermal inclusion cyst, and tuberculosis synovitis. The history is important in differentiation. A cystic swelling over the dorsal surface of the terminal finger joint may be a true ganglion or a mucoid cyst, formed presumably from mucoid degeneration of the dermis (Figure 3).

Treatment

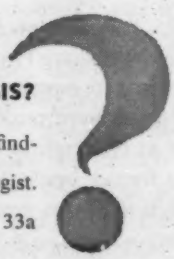
Ganglia occasionally disappear spontaneously. Treatment of persistent lesions is warranted for the relief of pain and weakness, and to satisfy the patient's desire to be relieved of the unsightly swelling.

A number of therapeutic technics have been used: rupture, aspiration, injection, irradiation, and excision. Rupture of a prominent superficial ganglion can at times be accomplished by striking it with a heavy book. About fifty percent of ganglia which are ruptured by this technic recur, and there is of course the danger of fracturing the underlying bone or so traumatizing the joint capsule that even if the ganglion does not recur itself, another ganglion may be produced.

Aspiration is unsatisfactory in most cases because of the gelatinous nature of the fluid. Even if the cyst can be evacuated it usually refills promptly. Injection of sclerosing agent or cortisone after aspiration offers little additional benefit. Hydrocortisone may be of value, however, in the treatment of small digital ganglia which develop in older patients with arthritis.

X-radiation has been reported to be effective in the treatment of some ganglia. However, about one and a half erythema doses are required, and the use of this much x-ray does not appear warranted, especially in the hand.

The most satisfactory method of treatment is surgical excision. This may be accomplished under either local or general anesthesia. A tourniquet should be used to provide a bloodless field. Incision over a joint should be made in line with the skin folds: longitudinal incisions on the dorsal and volar surfaces of joints should be strictly avoided. Meticulous dissection of the ganglion is essential if it is all to be removed without rupture, and if other structures—tendons, nerves, and blood vessels—are to be preserved. Portions of the cyst which may be left behind at surgery are the most common cause of recurrence. If the joint is opened during the dissection, it may be closed, but this is considered unnecessary by most surgeons. Careful closure of the subcutaneous tissue and skin is essential for the obliteration of dead space and for primary healing. A pressure dressing with the hand in the position of function should be worn for seven to ten days, after which motion may be started.

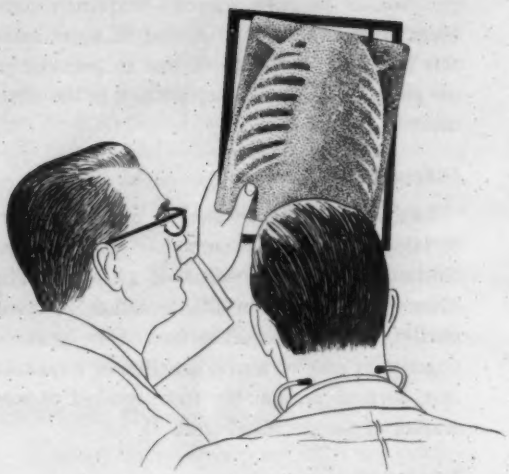


WHAT'S YOUR DIAGNOSIS?

Read the film and compare your findings with those of a top radiologist.

SEE PAGE 33a

X-Ray Films as Medical Evidence in Court



ALBERT FIELDS, M.D.
Los Angeles, California

". . . If the hand is held between the discharge tube and the screen, the darker shadow of the bones is seen surrounded by the faint shadow of the hand itself."
—W. K. Roentgen, 1895[1]

In a darkened laboratory at Wurtzburg on the evening of November 8, 1895, an electric current of about 10,000 volts was passed through a partially evacuated Hittorf-Crookes tube, which was covered with black paper. It was noted that crystals of barium platinocyanide, which lay nearby on the table, began to fluoresce. Thus x-rays were "accidentally" discovered by Wilhelm Konrad Roentgen (1845-1923).

On December 28, 1895, Roentgen presented his observations before the Wurtzburg Physical-Medical Society. Less than two months later, in February, 1896, x-ray plates were introduced as evidence in a lawsuit at Nottingham, England, near Robin Hood's former headquarters. The law is rarely so quick to accept new discoveries in medical science.

X-ray plates of a femur were admitted as evidence on December 2, 1896 in the District Court of Arapahoe County at Denver, Colorado.(A) The Haynes murder trial in New York(B) on October 21, 1896 was the first criminal case in the United States in which x-ray evidence was introduced. Little did Roentgen realize that x-ray films would become the principal form of illustrative medical evidence in almost every personal injury trial and industrial accident hearing.[2]

What Are X-Rays?

X-rays are electromagnetic waves which fall between ultraviolet radiation and gamma rays.[3, 4] Like the other members of the electromagnetic family—heat, radio waves, visible light, ultraviolet, gamma rays, and cosmic rays —x-rays travel at the speed of light, 3×10^{10} cm/sec. The x-ray wave oscillates at frequencies between 3×10^{16} and 3×10^{19} cycles per second. The wave length of x-rays range from 0.1 to 100 Ångström units (10^{-9} to 10^{-6} cm). Waves whose lengths are just longer than those of x-rays and, of course, whose frequencies are less, are ultraviolet rays, while at the other end of the x-ray range, there are the more rapidly oscillating, shorter wave-length, gamma rays

from radium and other radioactive elements.

X-rays are often described in terms of their penetrating power as either hard or soft x-rays. The hardest varieties have the highest frequencies, the shortest wave lengths, and penetrate most easily. They are also the most destructive of living tissue. The softer x-rays have lower frequencies, greater wave lengths, and less penetration.

For medical and commercial purposes, x-rays are produced by the impact of the cathode ray (a beam of fast-moving electrons) upon a target. Although the material of which the target is made, and some other factors, affect the nature of the x-rays generated, as a practical matter the hardness or softness of the x-rays produced is controlled by increasing or decreasing the velocity of the electron stream. The harder x-rays are produced by using faster electrons.

There is no such thing as "x-ray picture." An x-ray film, roentgenogram or radiograph is actually a skiagraph or shadowgraph presenting the "projection upon a photographic plate of a series of shadows of varying density representing the various structures through which the rays have passed."[5] The shadows exist on the photographic film, "because x-rays are absorbed to different degrees in different media."[5] It should be emphasized that an x-ray film is not merely a picture or photograph that reflects what the ordinary eye can see and which can be interpreted by most persons with reasonable ability:

"To interpret these shadows correctly one must know not only the appearance of the normal structure but also the alterations that take place when there is a pathological process present."[5]

Admissibility of Roentgenograms in Evidence

The use and rules of admissibility of x-ray films in evidence are generally related to the rules applied to maps, diagrams and photographs.[2] The exhibit is thus first marked for identification and is, after satisfactory foundation, usually admitted in evidence. X-ray films are not used to establish facts or to prove conclusively that certain conditions resulted from an injury or existed at the time the films were taken. Like other illustrative medical aids, x-ray films are used by an expert medical witness to help explain his testimony.[2] The law has taken cognizance that x-ray films represent objective findings rather than subjective symptoms expressed by the patient:[6]

"Objective symptoms are those which the physician by the ordinary use of his senses discovers from a physical examination . . . What he discovers through his vision, aided by a magnifying glass or an x-ray instrument, are objective symptoms."[(C)]

The admissibility of x-ray films in evidence has been recognized by most Courts and is clearly stated in the Corpus Juris:[(D)]

"When authenticated in the manner shown in this section, pictures or skiagraphs produced by an x-ray may be admitted in evidence in a proper case. X-ray pictures may be admitted where they tend to aid the jury to understand the nature and extent of injuries involved or to throw light on the physical condition of a person."

If the x-ray films were taken by or under the supervision and direction of the medical witness, he may be asked to describe the manner of their identification, date, place, positioning and if his machine was in good working order. He may be asked the time interval between the taking of the film and its examination by him and whether the film has remained in his possession ever since that time. If other films were taken, he may be asked how many and why they were not produced. He may be asked if the x-ray films were taken by the method and manner generally recognized in roentgenography and if the films are an accurate representation of the condition present at that time. It is then customary for the attorney to introduce the x-ray films into evidence and to ask the medical witness to present his interpretations and opinion.

Before taking the witness stand, the physician should select for discussion only a few significant films. These should be arranged in proper order so as to avoid fumbling and waste

of time. When necessary, the witness can show "normal" views, or illustrations of similar disease or make use of the blackboard to help clarify his interpretations of the x-ray films.[2] During the cross-examination, the witness should re-check the date and identification of each film handed to him by the cross-examiner and not take it for granted that he is being handed the same film that he previously discussed.

Interpretation of X-Ray Films in Court

"To interpret these shadows correctly one must know not only the appearance of the normal structure but also the alterations that take place when there is a pathological process present."[5]

In many instances, x-ray films are admitted into evidence by stipulation. However, x-ray films are not presented to the jury unless they are interpreted and explained by a competent witness. It has been held that any person who has by sufficient experience acquired adequate knowledge of roentgenograms and their interpretations may qualify as a witness. It was formerly common practice to call to court the technician who took the films. Nowadays this is rarely done and it is generally held that a technician may authenticate, but not interpret x-ray films, electrocardiograms, orthodiagrams, electroencephalograms, electromyograms and other laboratory aids.

Some roentgenologists contend that they are the only ones capable of interpreting x-ray films in or out of court. In examining a medical witness who is not a roentgenologist, adverse counsel may attempt to make much of this point. As a counter-argument, it should be noted that for one to testify as an expert it is not necessary that he be infallible or possess the highest degree of skill. It is sufficient if he possesses peculiar knowledge, wisdom or information regarding the subject matter, acquired by study, investigation, observation, experience or practice, not possessed by ordinary laymen or inexperienced persons.[E] The frequency of disagreements among experienced roentgenologists suggests that they are not infallible. Furthermore, it can be brought out that the non-roentgenologist witness has had the training and experience of interpreting thousands of x-ray films,[F-K] as well as the opportunity of correlating the x-ray films, with the history, clinical, laboratory and operative findings in the patient under discussion.[7]

The increasing incidence of medical professional liability claims and the adoption by courts of the res ipsa doctrine[L] has necessitated the taking of thousands of superfluous x-ray films.[M] However, there are still many instances when the medical witness on the stand regrets that more films were not taken. Important information can often be presented through follow-up x-ray studies, over- or under-exposure, radiopaque dyes (angiograms, myelograms, bronchograms, nucleograms),[8] and depth films (planograms or tomograms). Skull and pelvic fractures are often better visualized in stereoscopic views. Some cervical spine fractures and dislocations are evident only on films taken from oblique angles or with the spine in flexion and slight rotation (Boylston views).[9-12]

Whenever possible, all available films should be examined by the prospective medical witness before he comes to court, with proper viewing equipment and in light-controlled rooms. When necessary, additional x-ray examinations should be obtained before trial rather than commenting from the stand that the films are unsatisfactory and inadequate. However, there are times when the witness will be unable to express a valid opinion and should admit that there may be errors in diagnosis in the x-ray films under discussion. In discussing fractures, Harrison has stated:[14]

". . . immediately the question arises as to whether this rupture in the continuity of the line is due to the presence of a plate of cartilage between an epiphysis and its diaphysis, or is only apparent and really due to superimposed shadows such as may appear when the shadow of the gluteal fold falls across the upper end of the femur, or when the space between two bones makes it appear that the bone lying behind them is broken, or when it is due to the infolding of the soft tissues on

the anterior aspect of an interphalangeal metacarpalphalangeal, or metatarsophalangeal joint, falling across the shadow of a phalanx; it may be due to a large nutrient canal of a large venous channel, such as can be seen especially in the skull, where the diploic canals form striking pictures, or in the bodies of the vertebrae; it may be due to a negative shadow between two muscle planes, such as occurs at the edge of the psoas muscle where it passes across the tips of the lumbar transverse processes and suggests a rupture in their continuity; it may be due to something extraneous as when shadows arise from depressions in the superficial fat due to compression of the patient by encircling bands; it may be due to a shadow caused by the dressing or fixation apparatus, or to discharge from the wound."

Occasionally disputes arise as to the significance of a "solution in continuity" of the bone. Follow-up x-ray films showing changes indicating bone absorption and callous formation usually will settle that the bony marking represent a recent fracture rather than an old fracture, a blood vessel, congenital abnormality or artefact. It may take several weeks for linear subperiosteal fractures to become apparent on x-ray films. Even minor spine injuries can produce disturbances in blood supply that after several months will be revealed by x-ray films showing vertebral collapse. After fracture progress x-ray films are also of value in determining the maintenance of anatomical alignment and the degree of healing.

It is generally agreed that screen projections or enlargements of minifilms (70 mm.) are not as accurate as standard films. Similarly, orthodox films and a two-power hand lens will provide all of the information obtained by magnified image films, which create distortion and require more radiation exposure.[13] It is probable that improved machines with image intensifiers and photofluoroscopy will provide future courtroom application.

Most courts will not permit x-ray films to go to the jury-room because more harm than good can come from untrained persons attempting to interpret x-ray films or even to relate the films to the medical testimony that they have heard. Medical witnesses prefer to make interpretations from negative x-ray films. However, some courts have stated that the print made from the negative of a roentgenogram is no less authentic than a print made from the negative of any film[N] and should be admitted in evidence when the negative x-ray film is lost. Some attorneys prepare positive prints and enlargements,[13] which can be taken to the jury-room to emphasize fractures and other abnormalities. Such enlargements usually do result in loss of details but may serve some purpose. The negative x-ray film should be in evidence in case of suggestion that the print has been touched up.[2]

Should X-Ray Films Be Kept Out of Court?

"Roentgenograms are marked with arrows, circles and lines, then displayed to an impressionable jury, often by an orthopedist-radiologist team, who readily convince the jury that dire injuries are present."[15]

It is rather dramatic when the interpreter of shadows, the medical witness in Court, points to the film on the illuminated viewing box and describes various abnormalities. Obviously a jury can be swayed by misinterpretations of x-ray films by the medical witness who is unqualified or dishonest, consciously or unconsciously. A prominent San Francisco roentgenologist has advocated legislation to prohibit the demonstration to the jury of x-ray films that would "impress and sway their emotions."[15] It has been suggested that, just as with bacteriological, pathological and other laboratory tests, only reports of x-ray films be presented in Court.[15]

Unfortunately, as in many other fields of medicine, x-ray diagnosis is not an exact science. There are frequent disagreements as to the interpretation of roentgenograms even by experienced, honest and impartial practitioners. Even though the jurors are not qualified to interpret scientific evidence, it is their responsibility to weigh and evaluate this evidence. To properly consider the reasons given for testimony and to decide which of the con-

flicting expert testimony appears to be best supported, the jury is entitled to see the x-ray films. If the orthopedist-radiologist team or any other medical witness is dishonest in court testimony, is it likely that the report, submitted without films, will be any more honest? Besides, under our adversary system, the opposing side has the opportunity to present another medical witness with his honest opinion.

Terminology

"How forcible are right words."
—Job, *vl, 25, c. B.C. 325.*

In presenting any medical evidence, including the interpretation of x-ray films, there is need for clarity and better standardization of terminology. This applies to descriptions of "normal" appearances as well as to injuries, diseases, anomalies and other abnormalities. Frequently used terms such as "recent" and "old," "large" and "small," "healed" and "healing," should carry more specific qualifying phrases.

Failure to note congenital anomalies or preexisting lesions such as arthritis or old fractures and statements such as "probably not connected with the injury" may lead to misinterpretations. Ewing[7] suggests that in these instances, there should be a separate heading in the report, "Other findings not connected in any way with the trauma." The use of stock phrases such as "no significant bone abnormalities," and "no definite evidence of fracture, dislocation or other bone pathology," can be used to imply that there was *some* evidence of something abnormal. To avoid having his testimony discredited in Court, the radiologist, or other physician who is interpreting an x-ray film, must take special care with the numbering of ribs or vertebrae and with checking dates and identifications on the films.

Other Factors in X-Ray Films as Evidence

When the x-ray films are not available in Court, under some circumstances, when the witness indicates that the reports of the x-ray films are part of his records, he may be permitted to interpret these reports to the court. Where x-ray films have been lost, the medical witness may be permitted to testify as to what these films showed after a proper foundation has been laid showing the unavailability of these films.

Soft Tissue Injuries

Even in the absence of fractures, x-ray studies may be of great help in demonstrating injuries. X-ray films can localize metallic foreign bodies in the eye(O) and other parts of the body.(P) A ruptured abdominal viscus will usually show free air under the diaphragm in the upright view. Splenic injury may produce an enlarged splenic shadow. A kidney injury may be suggested by obscuring of the psoas muscle shadow by retroperitoneal haematoma or by dye extravasation following IV or retrograde pyelography. Pneumoarthrography or air injection into the joint space may demonstrate cartilage and ligament injuries. Restricted range of motion in forced flexion-extension films is suggestive of musculo-ligamentous and peri-articular injuries. Diminution in normal cervical and lumbar lordosis due to muscle spasm and soft tissue injuries following a rear-end collision can similarly be demonstrated by x-ray studies.[9-12, 16] Persistent pain after a soft tissue injury may be due to blood extravasation with subsequent calcium deposits demonstrable by follow-up x-ray films.[11]

Who Owns the X-Ray Films?

In some personal injury claims a dispute arises as to the ownership of the x-ray films.[17, 18] The contention of the insurance carrier, the plaintiff's or defendant's attorney, or even of the patient who paid for the films, that they are entitled to possession of the x-ray films, has been rejected by many court decisions.(Q) In commercial photography, the customer is given the prints, but the studio retains possession of the negative. Where no specific agreement has been made with the patient, it has been held that the patient tacitly consented to the usual and well-established practice of the medical profession to retain possession of the x-ray films. X-ray films taken in a laboratory

or hospital are indexed as part of the hospital records and are considered as hospital property.(B, 8)

Court decisions have emphasized that in themselves x-ray films do not have intrinsic value. The patient is paying for the skill and knowledge required to make and to interpret the films. It is customary to send x-ray films along with the report to another institution or to the physician presently attending the patient. In all such instances, the films should be returned to the proper owner[13-15] whose name is imprinted on the film, the radiologist or other physician under whose supervision the film was made.

Nowadays the physician must consider every case as a potential claim. The missing x-ray films may help to justify his treatments. Since the storage of x-ray films presents a space problem, it is suggested that after five years, microfilm be made of all x-ray films and be stored for future reference. Even apparently normal films of children should be retained until the patient reaches twenty-one years. In suspected malignancies, other significant abnormalities or where litigation is involved, the films should be permanently retained.

Many of the outlined problems have been discussed in greater detail by Donaldson.[19]

Summary

1. The proper presentation of x-ray films in court is often a determining factor in litigation outcome.

2. It is essential that adequate films be made and be properly identified.

3. Special views and follow-up studies must be made before coming to court.

4. For orderly, succinct presentation of medical testimony in court, a few illustrative films should be selected and related to the clinical findings.

5. Because of increasing litigation, it is advisable that all films be stored for five years and then microfilmed.

Legal References

(A) Smith v. Grant, Case 24,159, Arapahoe County Court, Col. 1896.

(B) State of N. Y. v. Haynes 56 Albany L. J. 309, 1897.

(C) Reeder v. Thompson et al. (Kans.) 245 Pac. 127.

(D) 32 Corpus Juris Secundum, Sect. 721, p. 615.

(E) Wallace v. State, 35 Co. (2d) 703, (Miss. 1948).

(F) Call v. City of Burley, 57 Idaho 58, 62 P (2d) 101.

(G) Wasoba v. Am. Glycerine Co., 115 Kans. 507, 223 P. 272.

(H) Rawleigh v. Donoho, 238 Ky. 480, 38 S.W. (2d) 227.

(I) Whipple v. Grandchamp, 261 Mass. 40, 158 N.E. 270.

(J) Saas v. Hindmarsh, 184 N.Y.S. 467.

(K) Vale v. Campbell, 123 Ore. 632, 263 P. 400.

(L) Agnew v. City of Los Angeles, 186 P. (2d) 450 (Calif. 1947).

(M) Morrill v. Komansinski, 41 N.W. (2d) 620 (Wis 1950).

(N) Beauchamp v. Davis et al, 217 S.W. (2d) 822 (Ky. 1948).

(O) Madis v. Stellwagen et ux, 227 P. (2d) 445).

(P) Gresham v. Ford, 241 S.W. (2d) 408 (Tenn. 1951).

(Q) McGarry v. Mercier Co. 272 Mich. 501, 262 N. W. 296; Kelley v. House 338 Penn. 190, 12 Atl. (2d) 579.

(R) Whipple v. Grandchamp, 261 Mass. 40, 158 N.E. 270.

(S) Maranville v. State Bd. of Equalization, 222 P. (2) 898 (Calif. 1950).

Bibliography

1. Roentgen, W. K.: Ueber eine neue Art von Strahlen. Wurtzburg Physical-Medical Society, 28 Dec. 1895.

2. Fields, Albert and Hirson, H. L.: Illustrative Medical Evidence. Los Angeles Daily J. Report Section, Part III Pp. 22-24, April 28, 1958.

3. DuMond, J. W. H.: Nature of X-Rays, Encylopedia Brit. 23:838D, 1948.

4. Savit, Carl H.: Personal Communication, 1960.

5. Baetjer, F. J. and Waters, C. A.: Injuries and Diseases of the Bones and Joints. New York, Paul B. Hoeber, Inc., 1921.

6. Fields, Albert: Disability Evaluation, Los Angeles Daily J. June 5, 1958, June 6, 1958.

7. Ewing, C. L.: Medicolegal Radiology, Radiology 63:673-7, November, 1954.

8. Grassberger, A. and Seyss, R.: Nucleography in In-

juries of the Lower Thoracic and Lumbar Vertebral Column. Ztschr. Orthop. 88:344-48 (#3) 1957.

9. Fields, Albert and Hoesley, J.: Neck and Shoulder Pain. Calif. Med. 70:478-82, June 1949.

10. Fields, Albert: Cervical Disk Syndrome, Am. Pract. 2:724-30 July 1948.

11. Fields, Albert: The Autonomic Nervous System in Whiplash Injuries. Internat. Rec. of Med. & G. P. Clinics 169:8-10, Jan. 1956.

12. Jackson, R.: The Cervical Syndrome. Springfield, Ill. 2nd ed. C. C. Thomas, 1959.

13. Gilardoni, A. and Schwartz, G. S.: Magnification of Radiographic Images in Clinical Roentgenology. Rad. 59:866-78, Dec. 1952.

14. Harrison, B. J. M.: A Textbook of Roentgenology. Baltimore. W. Wood & Co. 1936.

15. Garland, L. H.: Forensic Skiagraphy. Calif. Med. 87:295-97, Nov. 1957.

16. Gotten, N.: One Hundred Cases of Whiplash Injury. After Settlement of Litigation. J.A.M.A. 162:865-7, Oct. 27, 1956.

17. Speller, S. R.: Law Relating to Hospitals and Kindred Institutions, 2nd ed. London. H. K. Lewis & Co. 1957. P. 246.

18. Legal Ownership of X-Ray Films: Brit. M. J. 80-83, Jan. 13, 1934.

19. Donaldson, S. W.: The Roentgenologist in Court. 2nd ed. Springfield, Illinois. C. C. Thomas. 1954.

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DIET IN CORONARY ATHEROSCLEROSIS

A series of 100 patients with proved coronary thrombosis and myocardial infarction was observed for 12 years. Two groups of 50 patients each were studied to evaluate the results of treatment by a low-cholesterol, low-fat diet. In the control group of 50 patients who did not follow any dietary program, all patients had died by the 12th year. In the group of 50 patients treated by the 25-Gm. low-fat diet, the survival rate at the 12th year was 38%. More extensive studies of the therapeutic value of nutritional methods in the treatment of human atherosclerosis are necessary.

LESTER M. MORRISON, M.D.

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EDITORIALS

PERRIN H. LONG, M.D.



POLLUTION: CAUSES, DANGERS AND CONTROL

II. Dirty Water

Public Health Administrators and physicians at large in our country have prided themselves on the inroads which have been made on the morbidity and, hence, the mortality from water and food borne diseases, especially those of the enteric group, in the last century. They should rightly be proud of the achievements which we have witnessed: the virtual elimination of typhoid fever, the marked decrease in diarrhoeal diseases in childhood, and the virtual elimination of dysentery, both amoebic and bacillary as a major health problem. Drinking water, milk, and food, from the point of view of bacterial or protozoal contamination, have been "pure" in this generation. The danger of developing significant illness following the ingestion of drinking water, milk or food has been minimal all over the United States.

While these factors are well controlled now, a cloud which is gradually enlarging on the horizon has disturbed our unbounded enthusiasm about the purity of our water, milk and food. And it is water, i.e., *"dirty water,"* which we wish to discuss today. All of us are aware of the "softness" and "hardness" of water. We know what happens to a population when drinking water is deficient in iodine, just as we know what happens to the teeth when drinking water contains excessive amounts of fluorine compounds. However, as physicians we do not think enough about the increasing contamination of water with a myriad of chemical substances, nor do we view to the degree which we should, the gradual disappearance of our water reserves, caused by a marked usage of water by industry and by our people who in the last decade and a half have participated in what appears to be a world population explosion.

We will discuss the question of water supplies first. In certain areas of this country, the water table and the pressure it creates has fallen to the point at which sea water is beginning to seep in, thus rendering water supplies less and less potable. Certain coastal

areas in Texas are wrestling with this problem. In other parts of the country, due to markedly increased usage of water, available supplies are running low, and the cost of providing new sources of water is becoming almost exorbitant. Then too, one must always bear in mind that the possibility exists of long range climatic changes, markedly affecting rainfall and hence water supplies. We must remember that within five thousand years, considerable parts of the Sahara Desert had water enough to support budding civilizations and cultures. Well, what can be done about the threatening exhaustion of water supplies in certain areas? One thing that would help us would be to muffle the population explosion. Another would be (primarily useful in coastal areas) to foster much more research on methods for "de-salting" sea-water. A good example of what can be done by this method when costs are not considered too closely is in the capital of the Sheikdom of Kuwait, where the major portion of the water supply is provided by "de-salting" water from the Persian Gulf. In general though, to make this method successful for the production of potable water on a large scale, would require the costs to be kept below fifty cents per thousand gallons of water produced. The third possibility and one that most people find a bit distasteful currently, would be to recover the water from raw sewage and use it over and over again for human consumption. The recovery of water from sewage is being carried out already in certain cities in which the water table has fallen greatly in order that water for industrial use may be available. An example of this can be found in Baltimore, where water is recovered from raw sewage, the solids taken out (and sold for fertilizer), and the bacteria-free sewage water sold at the rate of many million gallons a day to the Bethlehem Steel Company. There is talk of and definite projection of using recovered water from sewage in the not too distant future in certain areas in our country for all purposes. And what's more such a program envisaged using the water over and over again.

Now this is where the problem of "dirty water" comes in. What do we mean by "dirty?" We mean water containing a variety of chemicals from industrial and other sources, also radioactive material entering the water in industrial wastes, from fallout material, or from a major break in techniques used to store atomic wastes.

One of our major problems relative to potable water is that we have always taken it for granted, and we really don't know too much about it. Last September, at a "Conference on Physiological Aspects of Water Quality" which was financed by the Public Health Service, it was pointed out that there were at least four questions to which the Conference could address its attention.

I. "What are the desirable components of water for human consumption as prescribed, but not always provided, by nature?"

II. "What is the optimum range of concentration of each of these components, whether supplied wholly, or now only in part, by nature, in water for drinking or culinary purposes?"

III. "What changes in the composition of human water supply have been affected by human artifice?"

IV. "To what extent are these artificial changes harmful?"

When one comes to consider these four questions, it immediately becomes clear that we as doctors will be rather hazy about the answers. For example, consider the possible effects of modern fertilizers, pesticides, and insecticides (close to a billion pounds of insecticides and pesticides are being used a year in our country) as contaminants of surface water. Also, the million and millions of pounds of detergents. These must decimate certain types of aquatic life. Next, think of industrial wastes with the multitude of contaminants which are poured into our streams. This type of pollution is well known to those of us who are fishermen and who have seen the fish disappear from our neighborhood streams, with the increase in industrialization and subsequent pollution of the waters in our lifetime. And finally within the past few years to add to the

problem has been contamination with atomic wastes or "fallout."

One of the greatest problems in respect to chemical pollutants is that we do not have acceptable criteria or standards of permissible polution in so far as many of the chemicals are concerned. Many standards are based on informed and calculated guesses. (We might add that the arbitrary level of coliforms in salt water bathing areas is based on "ignorance coupled with caution.") As anything that is not water, which is found in water is technically a pollutant, we must realize that all pollutants are not deleterious to life. Some, such as minerals, are necessary for life, and supply important substances for the well-being of man. However, some can be toxic and harmful and of course we are still in the dark relative to the effects of the increased amounts of radioactive substances which we are ingesting in more or less greater amounts.

The increasing problem of pollutants must be kept in mind by all of us, because of their possible effects on the well-being of living things.

As Professor Abel Wolman pointed out in his evaluation of the Conference, there are many needs which have to be met before we can have even moderately adequate knowledge of this field. Among these are:

I. A need for specificity and accuracy. A number of our assumptions still remain to be demonstrated.

II. There is a great need for fundamental and basic data. We need to know and recognize that certain artificial and even designed pollution has for its aim the betterment of man's metabolic process. Also we must not confuse "an association of events and a cause and effect." We need a base line.

III. There is a dearth of epidemiological information in the field of pollution. We should be worried about our lack of epidemiological data.

In other words we are on the threshold of knowledge. Each and every physician can assist by keeping constantly in mind the need for accurate reporting in and of any diseases which historically seem to be associated with the ingestion of pollutants.

TWO HUNDRED AND FIFTY SHORT

In an editorial *(Resident Physician,* July, 1960) your Editor pleaded with the young physicians of this country to sign up in the Berry Plan and not to take the chance of being drafted. We based our plea on the fact that we were living in "perilous times . . . and as good citizens we should support to the hilt the foreign policy decisions made by our government." We pointed out that as doctors of medicine, we had a special mission to provide top-flight medical care for the members of our Armed Forces. That is exactly what the Berry Plan was created for! Later, *(Resident Physician,* December, 1960) we begged last years interns, and their advising chiefs of service, not to try to play it *"smart,"* or to *"figure 'the angles,'"* but rather to close the ranks and support the Berry Plan to the hilt. We pointed out that, if there was a *doctor's draft,* the image of the American physician, already somewhat tarnished in the eyes of the public as the result of a preoccupation with etiquette and economics by certain "leaders" of our profession, would be further sullied.

Our words went unheeded and within this month about two hundred and fifty young American doctors *have had to be drafted* to provide a reasonable number of doctors to look after the members of the Armed Forces and their dependents.

A year ago we believed that we were living in "perilous times." Today, we feel that with "brush-fires" threatening or occurring all over the world, (even ninety miles from our own borders), that it behooves all of us to sacrifice some of our personal interests to the greater good of our country. Only if we show by

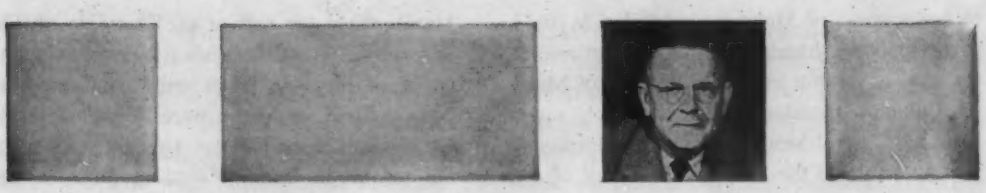
our acts and deeds that our prime interest is to prevent all that we take pride in, and believe in, from going down the drain, will we be able to create the image which will make the USSR, its satellites, and the neutral and uncommitted countries realize that we will stand up and fight for our beliefs. Recently, Joseph Alsop has stated *(New York Herald-Tribune,* May 19, 1961), "When an enemy (Khrushchev) publicly announces that he will defeat you, without having to bother to fight, the announcement ought to cause deep concern. Nothing could be less reassuring if you think about it." Then as our President recently said *(New York Times,* May 16, 1961), "I am in need of the support of the American people, their understanding, their patience, their willingness to endure setbacks, and risks and hardships in order that this country can *regain* (italics ours, Ed.) leadership and initiative."

Now as far as the medical profession is concerned, one of the ways in which we can assist in creating the image of a united people, and help to "regain leadership and initiative," is to show the world that when called upon, we will volunteer to take care of the members of our Armed Forces. The fact that the required quota under the Berry Plan was not filled last year has contributed to the decline of our world prestige. It has been interpreted by some non-Americans as demonstrating that young American physicians are materialistic, self-centered, and are not really interested in the overall security of their country. We have also heard pointed references by the laity made to what they consider a lack of patriotism. This is bad. Let's not have it happen again. Let's oversubscribe the Berry Plan. To reach this goal, two things are required. First, interns must realize the gravity of the situation in which our country finds itself today, and secondly, the same has to be said about certain directors of intern training programs across our broad country. To our knowledge, some of them have advised their junior colleagues to have nothing to do with the Berry Plan. This to us is shocking when one considers the dangers which we face today! *We should not have to be drafting physicians!* Physicians of this country should understand the world tensions and react in a mature fashion. We are an educated, learned profession. Our image must be kept bright before the world and our fellow countrymen even though it means self-sacrifices.



"OFF THE RECORD . . . "

Share a light moment or two with readers who have contributed stories of humorous or unusual happenings in their practice. PAGES 25a and 29a



THE LONG AND SHORT OF IT

From Your Editor's Travels and Reading

THE PERIPATETIC CLUB

We interrupted our story of Jeanne Mance, the founder of the Hopital Hotel-Dieu in Montreal, in the June issue of MEDICAL TIMES, with the promise that we would portray the final years of the life of this illustrious woman. You will recall that she had just returned from France to Montreal with the three hospital nuns from La Fleche (the *Hospitalieres de St. Joseph),* and that she had learned that La Dauversière had, to put it mildly, "appropriated" the twenty thousand livres which had been given for the support of the Hospitalières in Montreal by Mme. de Bouillion. There are writers (such as William H. Atherton, Bulletin 282, *Hospital Progress,* 1945) who disagree with Francis Parkman's estimate, that La Dauversière was really somewhat of a fanatical scamp. In support of the point of view that La Dauversière was devoted and upright, he cites the historian Faillon as follows: "M. de la Dauversière, after having received from the hands of Mlle. Mance the 20,000 *livres* given by Madame de Bullion for their foundation, had taken them to the Treasurer of Savings in acquittance for the receipt, which he himself owed the King, as Receiver of Finances (tax collector) at La Fleche. His thought was to replace this sum when he had found a safe opportunity to put it out at interest, but after the loss by shipwreck of more than 100,000 *livres* which were due to the Treasurer, and more than he had of property, the 20,000 *livres* of the *Hospitalières* remained in the coffers of the King, and were lost without any recourse for them." It would appear from this statement M. de la Dauversière to say the least had been speculating with tax money due the King.

Obviously, it was a great blow to Jeanne Mance to lose the twenty thousand *livres.* Instead of an income of one thousand *livres* a year to support the activities of the *Hospitalières of St. Joseph* in Hopital Hotel-Dieu of Villemarie the three sisters were penniless and "suffered extreme penury." Furthermore, as Atherton points out, the Bishop of Canada (Laval) whom we suspect was always more or less at odds with the strong-minded and strong-willed Mlle. Mance, and who would have much rather preferred to have the *Hospitalières* of the two Hotel-Dieus (Quebec and Montreal) members of one order (Ursulines), really made life difficult for Mlle. Mance and the three founding sisters by doing nothing about their financial situation until some twelve years had past.

With the turning over of the nursing responsibilities at the Hopital Hotel-Dieu to the Hospital Sisters, Jeanne Mance, her withered arm restored to usefulness, became for the remainder of her life the Administrator of the temporal affairs of the Hopital-Dieu of Montreal. And, as each year passed she became more and more the first lady of Montreal. Her responsibilities were great because, due

to her support of Maisonneuve's plan in 1653 to bring out a hundred additional settlers, to the tune of 22,000 livres donated out of Mme. de Bullion's foundation funds (which saved New France and Montreal), little or no money was available to the hospital. The half of the Seignory of Montreal which had been made over to the Hopital Hotel-Dieu in return for the financial support just noted above paid little in the way of dividends in those days.

By 1662, Montreal was again in trouble because of Indian attacks, and Maissoneuve and Jeanne Mance decided to go to France to seek more aid from the Associates of Montreal. However, at Quebec, Maisonneuve was persuaded to turn back by the Governor, but the indomitable Mlle Mance proceeded on her way arriving in France late in 1662, and remaining there for two years. While in France two things of major importance to New France occurred. First the Hundred Associates of New France were required in 1663 to resign their Charter. A new government was created: the Sovereign Council of Canada, which according to Atherton, outwardly resembled a Crown Colony. Furthermore, the Associates of Montreal had dwindled to five, and in March 1663, Jeanne Mance representing both herself and Maisonneuve, ceded the charter of the Company, and all of its properties in Montreal, to the Seminary of St. Sulpice in Paris, thus undoubtedly fulfilling at least a part of Olier's original dream. The Sulpitians were now Seigneurs of Villemarie and Montreal.

On the return of Mlle. Mance to Montreal, she found how things had changed. The new colonial government was trying to reduce Villemarie to a satrapy, by sending in its own judge, and setting up its own court. Then in 1667 came one of the major blows for Mlle. Mance. Without warning the new government relieved her collaborator and friend of twenty-three years, Paul de Chomedey de Maisonneuve, as governor of Montreal, and shortly afterwards returned him to France!

At this time, Bishop Laval was becoming increasingly troublesome about the 22,000 *livres* which Mlle. Mance had exchanged with Maisonneuve for half of the Domaine of The Seigneurs. When the Bishop became administrator of diocesan funds and found out that 22,000 *livres* no longer were deposited in the Cash Foundation of the Hospital, while he did not accuse Mlle. Mance of theft or misappropriation of funds, he acted as though he doubted her judgment, and refused to approve of the deal which she had made. Despite the fact that the Sulpitians approved of the agreement between Mlle. Mance and Maisonneuve, Laval wanted a restitution in cash from either the Sulpitians or Mlle. Mance. In 1667, the Sulpitians took this matter up with the Privy Council in France. The decision of that group in essence was somewhat split in nature. Mlle. Mance's authority to make the deal was questioned, her judgment was not. The Sulpitians did not have to make any restitution. However, Atherton states that Mlle. Mance "bore the scar of this sorrow until her death." Laval on the other hand never let the matter die down even after Mlle. Mance's death. However, on his retirement (1680) his successor quietly dropped the matter.

Jeanne Mance was never what we would call a robust person, and in the last years of her life she was plagued with infirmities and illnesses against which her will-to-do fought a slowly losing battle. Her life and that of the three *hospitalières* was one of great financial poverty. At times, they had barely enough to eat and their clothes were so patched as to appear to be made of nothing but rags. However, despite her depression over the financial side of the Hotel-Dieu and her increasing infirmities, in June, 1672, Jeanne Mance was able to be present at the laying of the cornerstones of Notre-Dame Church ("La Paroisse") in Montreal. One of the five consecrated and dedicated foundation stones had a lead plaque inscribed: *"Demoiselle Jeanne Mance, Administratice de l'Hopital St. Joseph de Montreal."* One can easily imagine the joy which this gave the founder of the Hopital Hotel-Dieu.

Three months later Mlle. Mance who had been godmother to hundreds of children in Montreal was godmother for the last time, and

on the 18th of June, 1673, she died "in the odour of sanctity."

Now what should we think of this extraordinary woman. It is obvious that she was deeply religious, but there is no evidence that the cloister ever attracted her. She had enormous will power and drive. She got things done. She was fearless; nothing daunted her. She had the amazing faculty of feeling at home with the Queen of France or a Huron warrier. One cannot help but feel that she had a great sense of humor, a gay temperament, and a deep understanding of human nature. Bishop Laval criticized her for lack of judgment, but history shows that she exercised a prophetic type of judgment when she turned over the 22,000 livres to Maisonneuve and got in return half the *Domaine de Montreal*. She undoubtedly saved New France by this deal. And, then too, this remarkable woman was the first *lay nurse* in North America, and the first lay hospital administrator. What puzzles us is that we had never heard of her until our recent visit to Montreal. Here is a woman who in many ways was the equal and in some superior to Florence Nightingale as a pioneer in nursing and hospital administration. It seems strange to us that more is not heard about her in the American nursing and hospital circles. She should be enshrined high in the annals of both!

THE JOHNS HOPKINS MEDICAL AND SURGICAL ASSOCIATION

Your Editor attending a meeting at the end of February, which is always a pleasant and instructive event; the Biennial Meeting of The Johns Hopkins Medical and Surgical Association, a group composed of faculty, former faculty, graduates of the Hospital and Medical School, and of individuals who had attended the School of Public Hygiene and Public Health.

In the two days of the meeting more than eighty papers were presented. Certain ones were of outstanding importance and none were soporific or boring. An outstanding paper which is worth detailing was that given by Drs. Todd Frazier and Janet Hardy on the subject of "The Effect of Cigarette Smoking on the Outcome of Pregnancy: with Special Reference to the Frequency of Prematurity among Smokers and Non-Smokers." *The study, done under the auspices of the Department of Health of Baltimore, indicated that premature births were substantially higher among women who smoke cigarettes during pregnancy.* Prenatal interviews with two thousand, seven hundred and thirty-six women showed that prematurity rates increased with the intensity of smoking from 11.1 percent for the non-smokers to roughly twenty-three percent for women who smoked more than twenty cigarettes a day. For study purposes any baby weighing less than five and one-half pounds was considered premature. It was stated that "about twenty percent of such babies die compared to about three percent for babies who weigh more than five and one-half pounds at birth." Also, it was said that "there was a reduced prematurity rate among one hundred and fifty-four women in their study who elected to stop smoking during pregnancy." However, the authors went on to say that "there is no evidence that a reduction in prematurity rate could be achieved in a randomly selected group by their curtailing or stopping cigarette smoking during pregnancy.

While the paper had an overall cautious tone, three possible reasons were considered as to why smoking might cause premature births.

A. It might bring about a reduction in the mother's appetite; hence, a decrease in the weight of the baby.

B. Vasoconstriction caused by smoking may have a deleterious effect on fetal nutrition by decreasing the amount of blood reaching the fetus.

C. Smoking may be just one of a number of characteristics which mark a woman who is destined to be bothered by prematurity when pregnant.

Another interesting paper on the subject of Camouflage of Corneal Scars by Tattooing was presented by Dr. Kenneth L. Pickrell, Professor of Plastic Surgery, Duke University

Medical Center, Durham, N. C. Dr. Pickrell, using the ordinary instruments of tattooing, has developed a method of obscuring and eliminating corneal scars which is extremely effective and must be very satisfying to those individuals who have disfiguring corneal scars eliminated.

As a foot note to this meeting, it should be pointed out that Dr. Milton S. Eisenhower (the President of Hopkins) stated in his talk at the biennial dinner at which the oysters were magnificent as usual that the *annual expenditures made by the Johns Hopkins School of Medicine had doubled in five years.*

THE PUBLIC AFFAIRS COMMITTEE

On March 24th, your Editor attended an all-day conference, entitled "The Years of Challenge," presented by The Public Affairs Committee in commemoration of its twenty-fifth anniversary. There were a number of different topics under discussion but we chose in the morning to attend the Panel dealing with "Changing Social Patterns and the Family."

The first speaker, Nelson Foote, Sociologist, the General Electric Company, raised the question: "Have times changed since 1936?" He went on to point out that in answering it, one had to distinguish between private and public affairs as such affect the family. He stated that while social security had changed things over the years through its activities, and likewise changes had been brought about by the development of unemployment insurance, people still worry about not being employed or of being displaced in their jobs. Years ago one of the main reasons for displacement was that as people grew older, they lost their strength and had to step down. Now the worry is not that their strength will fail, but rather the fifty to sixty year old worker worries that his own particular skills may become obsolete, and that individuals with newer and more modern skills will replace him. These threats to job security are productive of serious inner fears in the worker.

In the area of public affairs, the worker can be aided by programs dealing with physical fitness, which make him feel that he will not lose out because of strength. Also educational programs which have as their aim training for middle age or for retirement are important. Many couples become lonely and lack companionship after their children leave home. It was pointed out that training for retirement is often a difficult problem because it is not easy to develop new interests in many people. However, every effort should be made to occupy the time and mind of the *husband* after he retires. Too often, plans for retirement are too ambitious and envisage trying to develop too many new interests, and to do too many things. It is better, Mr. Foote stated, to train the individual to have an interest in a few things of superior value and then to occupy himself with those on retirement or in his old age. He did not mention the undoubted plight of the wife who has her retired husband on her hands all day. Shouldn't she have training?

The second speaker was Jack E. Kettell, Headmaster, Dalton Schools, who discussed certain of the problems in education which are faced by this country. To begin with more is expected of education in this country than anywhere else in the world. It is our sensitivity to education which makes us so democratic. Education serves our national purpose, but it must be recalled that currently the direction of our national purpose has been more toward the national level and our activities locally have lessened.

Another factor of major importance is that the over-all relation between parents and school have become adversely changed. Mr. Kettell thought that this relation will get worse before it gets better. What has happened? Well for one thing as parents become better educated, their awe of, sensitiveness, and respect for the school and all it implies seem lessened.

Furthermore, schools are now expected to serve as substitute parents. This new demand schools accepted too rapidly and for too early periods in the lives of their pupils. One certainly has to conclude that the schools did not know what they were getting into. One can

inquire: How did they get themselves into this pickle? Well, two things happened. Organized education became more powerful and more omnivorous, while at the same time for one reason or the other parents abdicated their authority and shifted their responsibilities to the schools. Now the schools handle the moral and ethical problems of their pupils, questions of etiquette, culture, etc., in addition to their educational functions. They have in certain areas even taken over certain of the functions concerned with the religious development of their students.

It was pointed out that one of the results of the cold war, and this has been especially true since the advent of the first Sputnik, has been an increasing dissatisfaction with our overall educational program, and a rapidly increasing desire on the part of parents and pupils for education rather than for vocational training. A new emphasis is being given to intellectualism. Now a desire to have their children have a real education is the prime object with many parents, and the paramount force with other parents. More and more people want to go to college. With this drive to go to college, admission standards become higher and higher, and the desirability of being admitted to one of the so-called "prestige" colleges has increased enormously. This, in Mr. Kettell's opinion, has brought about the development of certain false values. Too much emphasis is put on "have to get into college" and students may over-prepare for college board examinations. This situation where it exists, is nothing but a perversion of the educational process.

Through much of our history schools have played a great role in "Americanizing" students. They also served as prime centers for social mobility. However this is now changing. The schools, at least those which are not bogged down in the morass of political, forced and regulated mass integration which is so greatly hampering and adversely affecting the educational process in New York City schools currently, are now having to judge the excellence of their social product. The problem of racial integration is often placed squarely upon the schools under Federal Court order to integrate when integration may not have the support of the community. (No better example of this currently can be found than that of the New Rochelle School Board being ordered by Federal Judge Kauffman to comply with his personal interpretation of the Supreme Court Decision of 1954, and with Attorney-General Kennedy entering this case as a "friend of the court."—Ed.)

How to solve such problems is very difficult and is causing increasing difficulties between parents and parents, and parents and the school. Finally, Mr. Kettell indicated that in his opinion we must take care that the educational product is improved. He frankly did not like the spectacle of weeping mothers and children trying to get the child into college. What can be done about all of this? Three things.

I. We must all try to understand what is happening to our schools.

II. Parents must retrieve certain of their own responsibilities for raising and educating their children.

III. They must face up to what's going on and then determine what they want for our society. (And your Editor might add, then by exercising their rights as voters, make certain that the legislative, judiciary, and executive branches of government, in other words the politicians, carry out their desires.)

The third paper of the morning was presented by Dr. James P. Dixon, Jr., former Health Commissioner of Philadelphia, and currently President of Antioch College, Yellow Springs, Ohio. His topic dealt with "Issues in Higher Education." To begin with, it was Dr. Dixon's belief that Education is a derivative of culture and that today it finds itself in a vise. Why? Because the world views Education as a highly moral enterprise. It is the first age or time in history which has recognized that it is possible to have all people in the world participate in the fruits of modern civilization. Today, there are four major pressures on Higher Education.

First, there is the pressure of size with all of its collateral problems of finance, faculty personnel, student body, housing, etc., and the problems of tax-supported versus voluntary institutions.

Secondly, there is the problem of complexity. As the college or university is the custodian of culture and knowledge, to stay abreast of rapid increase in knowledge is a real problem. The question now is, can a school do it? Or must the college or university specialize in its knowledge?

Thirdly, there is the pressure of time which presents itself as a conflict between the increase of time needed to achieve scholarship while time for acquiring knowledge remains the same, or may even be decreasing. No faculty or department wants to reduce its time. And finally, there is the pressure of content. First of all we have the conflict between the importance of the technical areas as compared with the liberal arts. We have the conflict between specialization and general education. There is the issue of the cross cultural content with the crossing values of the different cultures.

And lastly, we have the problem of action versus intellectual orientation. The university can provide political leadership and should be the center for and leader in social action. It is likely, said Dr. Dixon, that we will see increasing activity in this area. (We hope these activities will fare better than those recent ones of the academic coterie, surrounding President Kennedy—Ed.)

The speaker pointed out that there are two issues which are coming up for decision before too long has passed. The first concerns the two-year Junior or Community Colleges which take all the children that four-year colleges don't want. He felt that many of these would be needed. However, in these non-residential Junior and even four-year colleges, a second issue arises. That has to do with social problems created within families as maturity is developed. Or, might one say that non-residential colleges retard maturity because the brake of parental control and discipline is on too long?

In conclusion, Dr. Dixon pointed out that much more money will be needed to support the universe of Higher Education which faces us. That taxpayers should not forget that the college and university are useful agencies in national and international policy and that both are deeply concerned with our national survival. He ended by closing the vise with the statement, that human welfare and survival depend on the proper conjunction of technology and democratic freedom.

The final speaker of the morning was Dan Lacy, Managing Director, American Book Publishers Council. He began by saying that there is a real conflict between Education and some very strong pressures which are opposed to the sharing of knowledge and learning. This may take the form of censorship of books or of removing books from school library shelves. It may result from parental pressures on high school teachers relative to what books should be used in the teaching of English. Sometimes teachers are prevented from assigning some of the best of English literature (Whitman, Huxley, Orwell, etc.) for alleged moral reasons. At other times the stupidity of school boards in local school library censorship results in certain books being made unavailable to pupils. (It's hard to believe it, but the School Board of New York City ordered "Little Black Sambo" and "Huckleberry Finn" off the shelves because they were derogatory to Negroes.) It's difficult to realize that such nonsense can exist, but it always does when humorless, so-called liberals are indulging in emotional setting-up exercises and bend over backwards too far.

Why, it has gotten to a point where teachers have to be wary of really good current literature. As one of the best ways to find out what life is and really means is to read good literature, the student becomes frustrated when school boards, parents and in certain situations even the teachers, prevent them from reading such literature. This sort of ridiculous behavior breeds contempt in the minds of the young.

The rather frightening results of a young people's questionnaire was cited in discussion:

1. About half of the youngsters believed it proper to control the newspapers.

2. About half thought it right to muzzle individuals.

3. More than a half thought that those who "take the 'Fifth' " should be punished.

4. A fifth believed that the strong should dominate.

5. Two fifths stated that strikes should be abolished.

6. Half of them said that people can't determine what's good for them.

7. Four-fifths of the young people believed in obedience.

In the afternoon, your Editor attended the Panel of "Changing Attitudes Towards Health Care." As the papers presented by Drs. George Baehr, and Gerald Dorman will be published in full in the September issue of MEDICAL TIMES, they will not be considered here. The first of the other two speakers was Dr. George Gordon Reader, Professor of Medicine, Cornell University, who discussed some of the changes which are taking place. To begin with, changes are occurring rapidly in scientific medicine. There is more and more specialization which results in a narrowing of outlook and of responsibilities. Scientific research has become a big business. In ten years it is believed that Federal appropriations alone of a billion or more per annum will be needed to support medical research. A real problem which is of great importance even now is: Where are these scientists coming from? Who is training them now? Then too all of the auxiliary medical fields are trying to enlarge their scope. To keep research, medical education, development of auxiliary services, etc., in line generates the need for top-flight management. Without management, who will correlate the activities of the health team?

Another important development is that with the greater educational background of our countrymen, more people are learning what really good medicine is, and their tolerance of poor medical care is rapidly decreasing. This is something we must think about. People want the best and at the lowest cost. We must think of how we can save money for our communities in Health Care. A comprehensive care program is one of the answers. Then the patients' total needs are met. This may well represent the practice of medicine in the future.

The last paper of the afternoon was presented by Dr. George James, First Deputy Commissioner of Health, New York City. He discussed the role of government in Health, especially in relation to Health Services. Three things must be considered when government tries to meet Health needs.

The first is synthesis; i.e., getting experts to agree on what the goals are and how they will be attained. For example who and what is the "total patient" and how can one look at all sides of him. This demands team work; i.e., synthesis, and throughout modern medicine we find areas in which the needs are best met by a medical team. Then as ninety percent of medical case is given outside the hospital, how should we spread the coverage?

When it comes to improving the quality of medical care, we must realize that the setting of standards is very difficult, and recognize the tendency for minimal standards to become quickly the maximal standards in the minds of many.

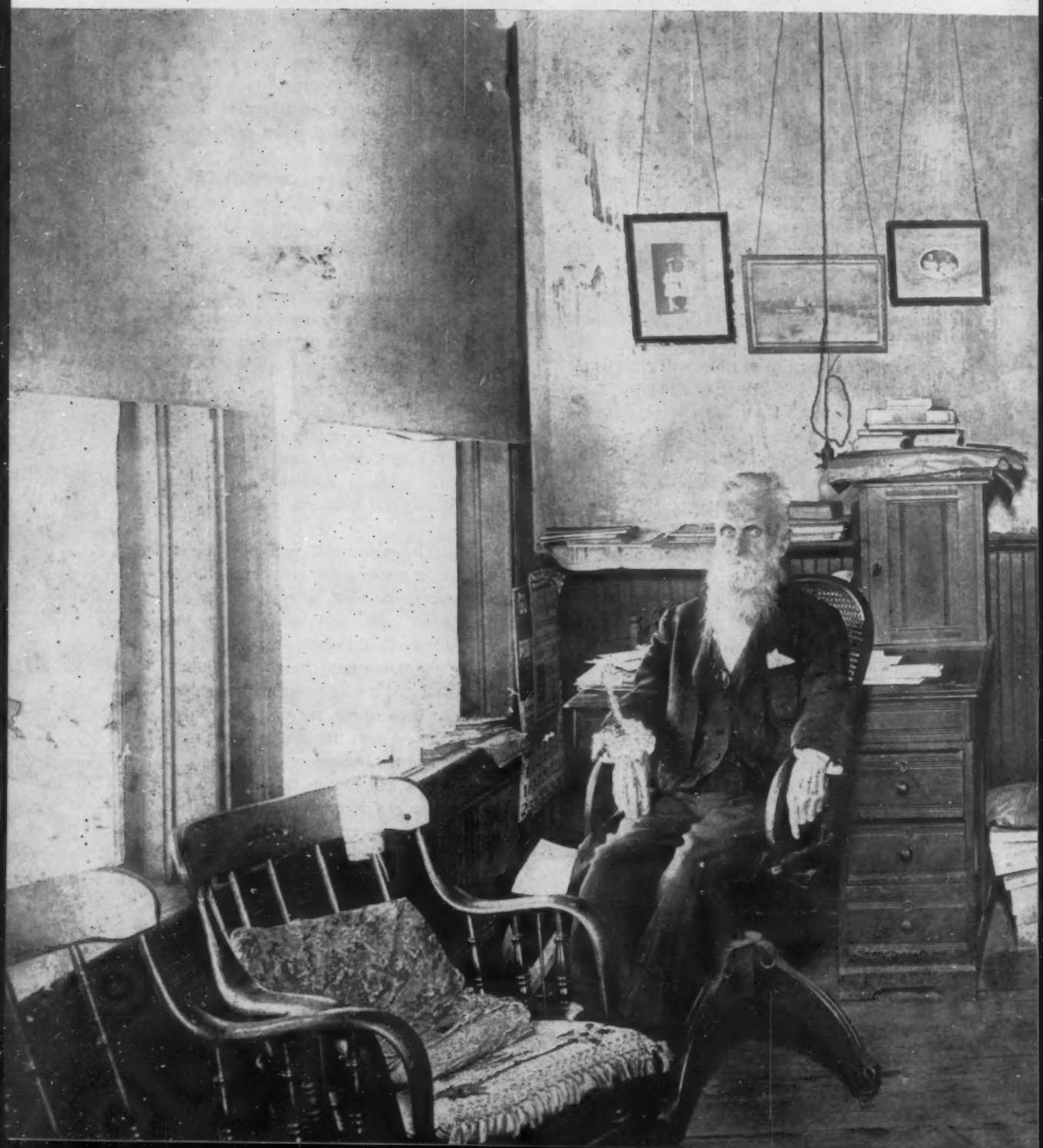
We must also realize that conflicts will arise. Why, when he comes under governmental care does a patient who when on his own was ten years without teeth, and didn't worry too much, suddenly have to have teeth? Well for one thing the government has to do its best by its patient. Also look at scientific conflicts which arise because we are not clear about cause or cure. A few: the controvery relative to tobacco and the occurrence of lung cancer, radiation levels and cancer, fat and coronary arterial disease, etc. Now good political science practice will be concerned with the manufacture of consent, it helps to keep conflict from becoming fatal, until agreement can be reached. A medical leader even though he is not always right must be relevant. Dr. James ended his talk by saying that out of conflict comes concern, and when concern arises then one tries to do something.

Remember When...?

Remember when . . .

A doctor's office looked like this? (Note the goldfish bowl, the comfortable looking chairs, the scales, the pictures on the wall, the hanging electric light over the desk.)

Well, we are certain that not many of our readers



have seen an office such as this one in Thomasville, Georgia. Its occupant, Dr. Thomas M. McIntosh, was a general practitioner of the old school who took post-graduate training in Heidelberg (1891) and became one of Georgia's celebrated physicians and citizens. This photo was taken more than forty years ago. Especially noteworthy as his patients are the twins at the far left on the back wall who were born without anal openings. Dr. McIntosh operated on both of them with perfect results. Photo: Dr. J. W. Reid, Thomasville, Ga.



Socialized Medicine in Sweden

GEORGE CONTIS, M.D.

The medical system in Sweden is one of the outstanding examples of socialized medical care in the world today. It is a system which has produced distinguished physicians and scientists who have made numerous contributions to medicine. In the fields of cardiology, thoracic surgery, neurosurgery, and radiology, Swedes rank among the world's leaders.

These achievements are even more impressive when one considers that this country has a population of only 7.5 million people. A study of this system, however, reveals both advantages and disadvantages which are characteristic of many socialized medical plans.

Training

A Swedish student is eligible to enroll in a medical school after completing high school. Selection of medical students is on a competitive basis, with grades being the most important factor. There is a strong feeling among educators that a personal evaluation of the prospective student would be practical, but as yet this policy has not been adopted. Women make up about 15-20 percent of each class, which is a slightly higher percentage than in the United States.

Once admitted to the six-to-seven-year medical program, a student is almost assured of graduation, unless he himself resigns. Courses in the five medical schools (Gothenburg, Karolinska in Stockholm, Lund, Umea and Upsala) are similar, for the government regulates the curriculum. The first two years are devoted to the basic sciences, and the last four or five years to lectures and clinical clerkships.

On graduation, the young physician has several choices for his future work. He may go directly into private practice, apply for a position on a hospital staff, or continue in research.

Hospital System

Sweden is divided into districts similar to states. Each district has one central hospital and several smaller hospitals in the outlying communities. These hospitals and their staffs are under local and national government control. The departments in the small provincial hospitals are usually limited to general surgery, medicine and obstetrics.

Patients who cannot be treated at the provincial hospitals are sent to the district hospitals. These in turn refer to the large academic hospitals in Stockholm, Gothenburg, Upsala, Lund and Umea. For the most part, the best medicine is practiced in the university hospitals, and it is these institutions that have developed the excellent physicians and medical traditions of Sweden.

Competition for staff posts in these academic hospitals is very strong, and a usual requirement is at least one year of training in a provincial hospital. A doctor begins as a first assistant with duties similar to those of a resident physician in America. He may be guaranteed a post for only a month at a time, but on prov-

ing his ability this is extended for longer periods. After several years, he may be elevated to supervising physician, a responsible position similar to that of assistant professor. The highest official is the professor, who formulates policy and is the chief administrative officer.

To qualify for a professorship, the physician must hold the title of *Docent*, in addition to his medical degree. This means that he must have completed work on a Ph. D. level, and have demonstrated exceptional ability in medicine, both clinically and in research. Usually when a professor is about to retire, the competition among his potential successors is keen. In a country where titles are of considerable importance, that of professor carries great prestige.

After a variable length of time, an assistant physician may decide to leave the hospital and go into practice as a general practitioner or specialist. Thus, his previous training in the hospital somewhat resembles the system of residencies in the United States and Canada.

Private Practice

Those who enter private practice have complete freedom in choice of location. These physicians are licensed by the *Medicinal Styrelsen*, a government bureau which regulates medical affairs. This organization also helps locate physicians for vacant practices, oversees hospital appointments, sets fee schedules, and has the power to revoke licenses.

Patients generally have free choice in the selection of their doctor from among those who practice within their district. In the less populated areas, however, there actually is no choice because of the limited number of physicians. These rural practitioners are especially busy.

Even in the large cities there is a definite shortage of physicians. The specialty clinics which receive referrals from large areas are often crowded, and appointments must be made in advance.

Private physicians essentially have no hospital privileges in the government institutions. Their practice is more or less limited to office and home visits. They may send their patients to a private hospital, but this is not done on a large scale. In the whole of Stockholm for instance, there are only two small private hospitals, with some private wards in several of the larger public hospitals.

Specialists

Should the patient desire the services of a private specialist, and he is not referred to one by a general practitioner, he must bear more of the cost himself. For the average Swede, who is quite economically minded, this type of care is out of the question because of the expense.

Specialists in private practice are therefore few. It is interesting, also, that general practitioners do not as a rule refer their patients to specialists, but instead directly to the hospital.

If, during the course of his illness, a patient should require hospitalization, he is referred to a local hospital by his physician. Once in the hospital, the patient ceases to have any connection with his private doctor, and the house staff assumes sole responsibility for the patient's treatment.

Here the patient loses the privilege of free choice of physician, and the referring physician has nothing more officially to do with his patient. When the patient is discharged, the physician receives a summary of the patient's diagnosis, treatment and course, and he resumes the responsibility for the patient's care.

For the general practitioner as well as the specialist, this separation of the hospital and the private practice is detrimental. The most challenging cases which are encountered in out-

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The Swedish System

A compulsory health plan covering almost everyone in Sweden, regardless of health or age, was instituted in 1955. The benefits of this plan include free hospitalization, doctors' fees, and travel expenses. Certain drugs prescribed for chronic illnesses (digitalis, insulin) are free.

If a person is employed and becomes ill, he can receive up to total compensation for each day he is sick. Even unemployed housewives can draw 60 cents a day. The maximum amount of time that these compensation and hospital benefits apply is two years. Thereafter, a patient must seek aid from his community.

The government has set a basic fee schedule for practitioners which has been agreed upon by the Medical Association, the Medical Board and the National Insurance Office. In Stockholm where the cost of living is greater, physicians' fees are proportionately higher. Specialists are permitted to charge more than the government schedule, but the patient pays the difference over and above what the government allows for a given service.

In some areas, the communities pay their physicians a basic annual wage. Under such circumstances, the physician may charge less than the government schedule.

Generally, a patient pays the private or the hospital out-patient physician directly, and receives a receipt. This he forwards to his district health insurance office, and is subsequently reimbursed three-fourths of the cost.

An interesting feature of the health insurance program is the maternal grant. Prenatal care is frequently administered by a general practitioner in the provinces, and by obstetricians in the larger city hospitals. Deliveries,

side practice are frequently the very ones which require hospitalization. The private practitioner is deprived of the incentive of pursuing the more stimulating problems and must rely on the accounting rendered him by the hospital staff.

A physician's continuing education depends to a large extent upon his patient experience, and in Sweden, the private practitioner is at a disadvantage. In addition, there is a lack of unity and continuity in the patient's care. A close patient-doctor relationship is difficult to maintain under these circumstances.

Some Swedish doctors feel that this separation is not so profound. They say that the patient and his family continue to keep in touch with the private physician, who in turn may consult with the house staff. Moreover, staff physicians are of the opinion that when a patient requires hospitalization, he should have available to him the services of trained hospital specialists. This latter argument reflects the attitude of some hospital physicians towards the ability of their colleagues in practice.

Incomes

Depending on where he practices, the average Swedish physician can earn from about $4,000 to $8,000 a year. He may supplement his income by becoming a consultant to a clinic (home for the aged, well baby clinic). On the days when he is the duty officer, a hospital resident receives fees from the patients he treats in the outpatient department.

In the smaller hospitals, residents are permitted to maintain a limited private practice. Under these circumstances, a physician's income may rise to $20,000 a year, but taxes

however, are made primarily by midwives in the hospitals. (The patient may pay extra to have a private obstetrician, but he frequently does not deliver the patient himself.)

The cost of prenatal care, the delivery and hospital stay are paid by the Compulsory Health Plan. Furthermore, mothers receive over $50 for each baby, as well as a supplement if they have children under ten years of age. If they were employed for nine months prior to confinement, they may be entitled to extra sickness benefits for three months. In addition, parents annually receive about $100 for each child under the age of 16.

The most recent statistics available for the Compulsory Health Insurance Program are from 1958, when a total of 5.5 million Swedes were insured. For that year, the cost of the program was $200 million, and was paid for by the insured (50%), the employer (25%) and the State (25%). More than half of the expenditures were for sickness and maternity cash benefits, about 14% for medical care, and 7% for pharmaceutical benefits. The administration of this plan cost $12 million.

All wage earners pay a withholding tax which includes fees for compulsory health insurance. There is no specific percentage of an employee's wages which is deducted for health insurance, although the amount may not exceed 2% of the annual income.

The Swedish income tax is levied on a graduated scale. An average unmarried male earns about $300 a month and pays 31% of his salary in taxes. An unmarried resident physician earns about $450 monthly and pays 36% income tax. If he were married and his wife earned less than $350 annually, his tax rate would be 26%.

would amount to 50 percent. Therefore, many Swedish doctors feel that it is not worth the time and trouble to augment their incomes.

Pro and Con

Thus, medical care in Sweden means that if the proper personnel and facilities are present, a thorough investigation and treatment can be accomplished. This is available to all Swedes, regardless of status, and includes the associated benefits of various clinics and workmen's compensation.

The drawbacks to such a system, however, are several. One is the enormous cost, especially to the lower income groups. Certainly they have the security of knowing that they will be "taken care of." But directly and indirectly, they pay for this through high taxes.

It is difficult to evaluate the actual role of government control over Swedish medicine. There are physicians who feel that they are too restricted in their profession by government regulation of medical training, hospital rules and fees. On the other hand, there are those who are pleased because they can treat their patients without worrying about the financial expense.

It depends on one's personal philosophy as to what effect the welfare-medical policy has on the Swedish people themselves. Some Swedes say that it fosters a spirit of complacency and undermines initiative. They cite the ever-present examples of malingerers and welfare cheats. Others find comfort in the knowledge that, economically at least, they need not fear prolonged and serious illness. The point can be argued both ways; yet most Swedes will say that for Sweden, it is a successful system.



ONE OF A SERIES
ON LEADING MEDICAL CENTERS

HARTFORD HOSPITAL

Averaging 36,000 admissions yearly, Hartford Hospital combines community service with graduate and postgraduate teaching programs.

Hartford Hospital is a voluntary nonprofit institution which combines community service with teaching and research programs.

Located in Hartford, Connecticut's capital, the hospital has 847 beds and 150 bassinets, and each year averages some 37,000 admissions.

The main building is a 14-story structure completed in 1948 at the cost of $10 million. Adjoining are a six-story obstetrical wing and a medical building of eight stories which provides private offices for staff members.

Other units provide residences for house staff, student nurses, staff nurses and nursing school faculty, a house for elderly people, and a hospital for convalescents.

Contemplated additions to these facilities are new buildings for the school of nursing, a new house for the aged and quarters for married house staff members.

Training

Postgraduate training includes a two-year rotating internship program (the second year of which is acceptable for the specialty boards as part of residency training in internal medicine or general surgery), and fully approved residencies in general surgery, internal medicine, anesthesiology, pathology, pediatrics, radiology, and obstetrics and gynecology. In addition, the department of neurosurgery provides a full residency in conjunction with the neurosurgical service at Grace-New Haven Community Hospital (Yale University).

Graduate education at Hartford functions under the guidance of the Graduate Medicine Committee of the Staff, the secretary of which is the full-time director of medical education. The director of medical education plans the program of services for interns as well as meetings and conferences, and works with members of the house staff on an individual and group basis.

Medicine

The three year medical residency program is arranged on a pyramidal basis with a group that usually numbers around 24, depending on changes caused by call to military service.



Volume and variety of experience is available to residents on the Emergency Service.



Slides and sections are a part of house staff's careful training in pathology.



House staff clinical instruction is centered on all important bedside rounds.





Pediatric residents are kept busy caring for newborn, plus a broad range of medical problems from infancy to adolescence.

There is a progressive increase in responsibility, culminating in a senior year which demands a high clinical and administrative ability.

The first year of training (junior assistant residency) follows one year of internship at Hartford Hospital or elsewhere, and consists of the following assignments: ward medical service, admissions officer, medical service at Newington Veterans Hospital, private medical service, neurological and psychiatric services. This year may complete the second year of the two-year internship contract and it is a prerequisite (or its equivalent elsewhere) to the assistant residency.

The second year (assistant residency) accentuates the accumulation of specialized knowledge and techniques in internal medicine. In general, assignments are made to each of these four services: cardiology and gastroenterology; pathology; medical service, Newington Veterans Hospital; outpatient service.

A group of three third-year residents (chief residents) are given a rotation through three major responsibilities.

- Consultation service and resident in charge of ward medical service. This includes daily rounds, fulfilling requests for consultation from other services, coordinating house staff participation in clinical work under the direction of the chief and the coordinator of the medical department.
- Outpatient diagnostic clinic. Supervises all house staff in their assignment to this service under the direction of the full time clinic director. Participates in nursing school lectures.
- Chief medical resident, Newington Veterans Hospital. Supervises the work of junior assistant and assistant residents under the direction of the chief of service at that hospital. Coordinates participation of residents in teaching rounds and clinics at Newington and Hartford Hospitals.

The surgical residency was established following World War II, with emphasis on broad



Medical library plays vital role in house staff training.

training for the surgeon who will practice in the small urban community. The program has continued to grow in stature with an expansion of facilities to further this original aim.

A dwindling ward service has become an increasingly serious problem to most surgical residencies. At Hartford this problem was anticipated and met in two ways. First, all semi-private surgery was allocated to the ward floor and is available for teaching purposes.

Second, the available ward beds have been increased: by furnishing the resident staff in surgery to the Rocky Hill (Connecticut State) Veterans Hospital, and by the Hartford Hospital staff sponsoring and supervising the surgical program at the U. S. Veterans Hospital at Newington, where an active surgical service has been in existence for 24 years.

Out of a total of approximately 20,000 operations at Hartford Hospital, over 6,000 general surgical procedures are performed each year. The ward surgical volume is composed of about 600 operations at Hartford Hospital, over 250 at Rocky Hill, and over 500 at Newington.

Cancer Surgery

From the inception of the program, the best assistant resident, senior level, has been chosen to be sent to Memorial Hospital in New York City for training in cancer surgery. The physician chosen has the benefit of a $1200 fellowship from the Connecticut Cancer Society in addition to the stipend from Memorial Hospital.

Under the direction of the director of medical education, an extensive hospital educational program has been developed, and surgical teaching has been expanded. In addition to instructing at the operating table and at daily disposition rounds, formal teaching rounds are held Monday through Friday from 4:30 to 5:30 P.M. The weekly surgical clinic is presented by the resident staff each Saturday morning in the amphitheater.

Surgical privileges at the Hartford Hospital require board certification or its equivalent and no assistants are allowed in the operating rooms without these privileges, with the exception of the resident staff. License to practice in the state of Connecticut is *required* for all residents.

Thoracic surgery, and proctology are included in the general surgical residency.

Attendings

The surgical attending staff represents a broad cross-section of surgical practice, reflecting their residency training in many centers, including: The Barnes Hospital, St. Louis; Lahey Clinic, Boston; Massachusetts General Hospital, Boston; Memorial Hospital, New York, Presbyterian Hospital, New York; Hartford Hospital.

The residency program is based on a modified pyramidal system with four years of surgical training after an accredited internship. The aim is to split off unsuitable candidates early and carry the deserving through to accreditation. Thus far this policy has been successful. The entire surgical residency program is approved by the American Board of Surgery and the American College of Surgeons.

Research facilities at the hospital show how a nonuniversity affiliated institution can supplement its training program in order to adequately perform its roll in medical education. At Hartford, special laboratories have been established to implement research in the areas of cardiopulmonary physiology, liver biochemistry, open heart surgery, anesthesiology, and others, making a total of 22 projects currently under investigation.

Postoperative recovery rooms and the emergency treatment unit are staffed by a special

group and, like the blood bank, are operative 24 hours each day. Two variable temperature and humidity rooms are used for therapy and study of hypothermia.

The Hartford Medical Library contains approximately 100 journals and more than 800 up-to-date texts. It also can draw upon the resources of the Hartford Medical Society Library and Yale University. A full-time librarian is on duty.

A complete diagnostic clinic with a full time director provides a valuable teaching service in outpatient medicine and in following service cases after their discharge.

As in most voluntary hospitals, patients are admitted to private, semiprivate or ward services. Because prepayment plans have in recent years reduced the number of patients admitted on ward service, the medical staff at Hartford has put into operation a plan whereby all semiprivate patients are included in the teaching program.

FUTURE MEETING

The annual scientific session of the Arizona Academy of General Practice will be held at the Ramada Inn, Tucson, Arizona from October 12th through the 14th, 1961.

Principle speakers on the program are:

- RICHARD W. TELINDE, M.D.
  Professor Emeritus of Gynecology
  Johns Hopkins
  TOPIC: *Cancer of the Cervix*

- MICHAEL DEBAKEY, M.D.
  Professor of Surgery
  Baylor University Medical School
  TOPIC: *Vascular Surgery*

- WALDO E. NELSON, M.D.
  Professor of Pediatrics
  Temple University
  TOPIC: *Infections in the Newborn*

- FOSTER MATCHETT, M.D.
  Assistant Professor
  Department of Orthopedics
  University of Colorado
  TOPIC: *Not announced.*

- Category Credit 1 will be given for this three-day course. Address inquiries to:
  Noel Smith, M.D.
  3614 N. 15th Ave.
  Phoenix, Arizona

HAROLD J. ASHE
Beaumont, California

Are You *Really* Insured Against Loss?



The physician is advised to make a regular check of his insurance coverage. He may find that he is underinsured — or totally unprotected against certain possible risks.

A physician may sustain a heavy casualty loss from which he never quite recovers because of either one of two oversights. He may have too little insurance coverage to replace in full the loss he sustains; or, he may have no coverage whatsoever against the particular disaster that befalls him.

It is only partial comfort to have a $20,000 fire insurance policy on a property when, after the fire, it is calculated the real loss amounts to $30,000 or more. And, it is no comfort to have full coverage against a loss by fire only to have a property destroyed by earthquake, windstorm or other casualty against which risk a physician has no insurance.

It is foolish to carry more insurance against a possible casualty than the maximum loss that can be sustained. Probably, however, most physicians err in the other direction, even if this is unintentional and not by calculated design.

A fire insurance policy on a physician's home, for example, may be sufficient to fully protect him on a total loss immediately after the policy is written. If such is the case, a physician may give no further thought to the matter until the policy renewal date approaches. However, during the period the policy has to run it may afford less and less protection with the passage of time. This is a very real danger in the case of policies written for a three-year period as a means of reducing the premium charges.

Rising Values

This diminishing insurance protection can come about because of any one or more of several circumstances. These are inherent both in a physician's professional and non-professional insurable assets.

The current replacement cost of a good many insurable assets may exceed by a wide margin the initial cost or their estimated value at the time the policy was written.

In the case of depreciable assets used in a practice, such as office furnishings, equipment and other items, the remaining unrecovered cost (cost less depreciation taken) may represent, in fact, only a fraction of their present value.

This is especially likely to be the case if a stepped-up depreciation method has been employed and items so depreciated are still practically new.

In addition, some professional assets may have been written off long since for income tax purposes and yet have considerable value, in fact.

So long as prices generally continue to creep upward, this trend has a tendency to reduce the degree of real insurance protection afforded by a policy written years earlier.

More Assets

A physician may acquire new professional equipment and office furnishings. These acquisitions may replace old equipment and furnishings he had at the time of buying an insurance policy. Or he may buy additional equipment and furnishings while retaining older assets. In either event, the larger investment he now has in his office may not be reflected in the amount of insurance a physician carries.

Professional Building

The danger of being underinsured may be especially acute if a physician owns his professional building, home or income property. In buying insurance on such holdings, he may be guided solely by the initial cost of property, less land value. Every time he renews his insurance policy he may secure coverage only sufficiently large to cover his original cost. He may even dare to reduce his protection in consideration of depreciation and obsolescence. Yet, building values have mounted steadily over the past few years, reflecting the rise in materials, labor and the other components that determine building prices.

Unless a property has been allowed to run down, its value is likely to at least remain constant, despite the aging process. And, in many areas, its value may increase. If a property is altered, modernized or enlarged, its value is certainly increased substantially.

Home and Furnishings

Very likely, a physician's home furnishings and other personal possessions greatly exceed the insurance carried on them. Personal possessions do, of course, decrease in value with the passage of time, with a few notable exceptions. For that reason, a physician may assume that past coverage is adequate for the present and foreseeable future. He may act in the belief that the acquisition of new personal assets merely offsets the decline in the value of older personal possessions. Often it doesn't work out that way.

With the growth and maturity of a practice, a physician is likely to possess more personal items of value — subject to loss — than he's aware of. Precisely because these possessions are personal most of them are not considered in a monetary sense. Some of these articles, although old, represent substantial replacement value, even if this value is considerably less than original cost. What's more, with the passage of each year, these personal items become more numerous.

Often a policy covering home furnishings, household and personal effects is sufficient only to cover the major items of value. There may be thousands of dollars worth of possessions in attics, basements and storage closets, as well as many exposed to daily view, which are not covered.

Overlooked Possessions

Among the items often overlooked in calculating the amount of insurance to carry are games, musical instruments, sports and hobby equipment, toilet articles, jewelry, linens, silverware, bric-a-brac, cameras, projectors and darkroom equipment, outdoor fixtures and equipment, camping and vacation equipment, drapes, text and reference books.

There may be valuable first editions and other books having substantial replacement value as distinguished from popular books of sharply declining value. A good many physicians possess works of art and antiques, some of which rise in value with the years, rather than decline.

Finally, there's chinaware and glassware as well as cooking utensils and clothing. This last item, particularly, may be overlooked. It may include expensive suits, gowns, coats, shoes, furs and accessories easily running into thousands of dollars in value.

At least once a year a physician should set aside some time to review the nature and extent of his assets and analyze the insurable risks to which they are exposed. In doing so, he may discover he is worth far more than he had realized, and that he is underinsured.

It may be wise to make this review in consultation with an insurance broker. The broker can analyze the various policies and explain in lay language precisely what hazards are insured against and the effect of any exclusion clauses in policies. The extended coverage on a fire insurance policy may be far less inclusive than a physician believes to be the case.

For example, a typical policy with extended coverage on windstorm excludes losses from frost or cold weather or ice (other than hail), snowstorm, sleet, waves, tidal wave, high water or overflow, *whether driven by wind or not.* A further clause points out that an insured loss occurs from water, rain, snow, sand, or dust only if the property covered *first* sustains an actual damage to roof or walls by the *direct force* of wind or hail, with the water, rain, snow, sand or dust entering through the openings *made by the wind or hail.*

How Much Risk?

A physician may be insured against the more obvious risks to which he is exposed, both professional and otherwise. He may be less disposed to insure himself against the apparently more remote risks. He may give more weight to the additional insurance cost than the disastrous losses which can arise from such a loss.

No matter how remote an insurable risk seems to be, the possibility of a loss being sustained should not be lightly dismissed. If, in fact, the risk is slight, the insurance protection afforded is accordingly less costly. Dollar for dollar of insurance premium, protection against other risks is as good an insurance buy as that afforded by fire insurance. If the premium seems high there is good reason for it: *the risk is greater than a layman assumes.*

Incidentally, on the subject of probabilities and possibilities, physicians outside the Pacific Coast states unwisely may dismiss earthquakes as a possible risk. Geologists consider earthquakes a possibility in every section of the country. Few people know that the heaviest shocks ever experienced in the U. S. centered in the southeastern corner of Missouri. The tremors changed the whole surface of the countryside and were felt as far away as Boston, 1100 miles distant.

Known as the New Madrid earthquakes, they occurred in December, 1811, and January and February, 1812. That was a long, long time ago, but it does dispose of the widely held belief that earthquakes are a nonexistent risk in most sections of the United States.

Even in California, which has experienced several devastating earthquakes involving heavy property loss, there is a tendency to ignore this risk—except in the immediate areas that have had one or more quakes. The Long Beach-Compton earthquakes of 1933 caught many property owners without insurance. Uninsured losses ran into the millions of dollars.

Whether a physician is adequately insured against the risks to which he is exposed only he can determine—preferably before disaster strikes. If he is not adequately insured, he may be gambling a large part of his professional and non-professional assets. Underinsured physicians aren't giving themselves a fair shake with the dice of chance.

P.O. Drawer 307





For a night of deep, refreshing sleep and a lively awakening... Noludar 300... one capsule at bedtime promises 6 to 8 hours of undisturbed sleep without risk of habituation, without barbiturate "hangover," toxicity or even minor side effects. Try Noludar 300 for your next patient with a sleep problem. One capsule at bedtime. Chances are she'll tell you

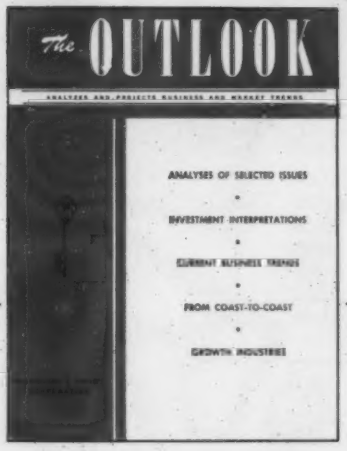
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BY SPECIAL ARRANGEMENT

STANDARD & POOR'S

The world's foremost investment advisory service analyzes and projects business and market trends for Medical Times readers.

ATTRACTIVE LOW-PRICED STOCKS

Good Values Still Available, But Selections Must Be Made More Carefully—Diversification Made Possible With Limited Capital

In characteristic fashion, low-priced stocks have outpaced the general market in terms of percentage gains. Our low-priced stock index, made up of issues around the lower end of the quality scale to afford a general measure of speculative fervor, has risen 36% since the start of the market upsurge last October, as compared with 27% for the Standard "500."

Although the New York Stock Exchange has warned about the pitfalls of uninformed speculation in low-priced stocks, this admonition does not apply to all stocks in the price range, but to the more radical situations with little intrinsic worth that have been carried to unwarranted heights. Actually, quality varies widely in the low-priced area. Through splits or large stock dividends, some blue chips were intentionally brought down in price to a more popular bracket. Hence, a low price tag is not necessarily indicative of inferior investment quality.

Good values are still available in this price category, but more careful appraisal is required. Our preference is for the better-grade issues.

An important advantage of low-priced stocks is that they permit diversification at low cost. This is a major consideration to the investor with limited capital whose problem is to spread his risks, one of the cardinal principles of successful investing. The accompanying portfolio, composed of selections from the list of well-situated low-priced stocks on the following page, illustrates how adequate diversification can be obtained with an investment of approximately $5,000.

● BEECH AIRCRAFT—The current year has proved to be a transitional period for this important manufacturer of private planes. Although commercial aircraft volume has been well maintained with the aid of higher export shipments, the completion of three defense subcontracts in recent months will be responsible for a 15% to 20% drop in sales for the fiscal year ending September 30, 1961. Net profits are likely to be in the vicinity of $1.30 a share, down from the record $1.80 (adjusted) for fiscal 1960. However, longer-range prospects for sales and earnings are bright. Based upon both Government and private surveys, demand for executive planes is expected to expand impressively in the decade ahead. Beech's well-established trade position should insure satisfactory participation in the anticipated growth of the industry, and its remaining military contracts will provide adequate diversification. *The stock has shown strength in recent market sessions, but is still attractively priced.*

A SAMPLE $5,000 PORTFOLIO

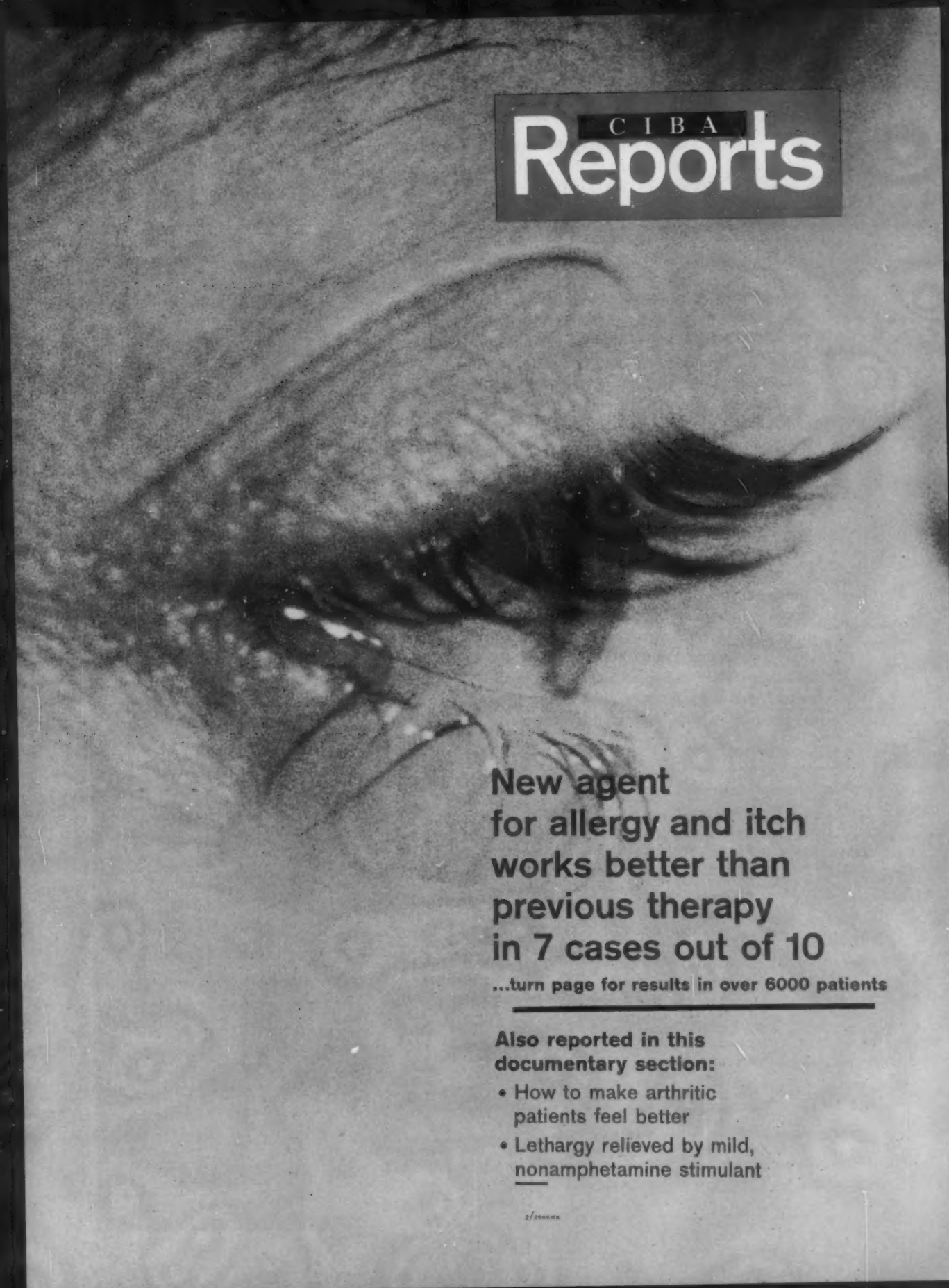
NO. OF SHARES		RECENT APPROX. COST	ANNUAL INCOME	APPROX. YIELD
35	Beech Aircraft	$875	$21.00	2.4%
35	Columbia Gas System	910	38.50	4.2
35	Interstate Power	840	33.25	4.0
30	Marine Midland	810	30.00	3.7
35	Texas Gulf Sulphur	875	35.00	4.0
		$4310	$157.75	3.7%

● Columbia Gas System—This leading wholesaler and retailer serves an extensive area ranging from the North Atlantic Seaboard through the Appalachian district to the Midwest, and is broadening into petrochemicals. A direct system-owned pipeline ties in with controlled Southwestern gas reserves. To alleviate the upward trend in gas prices in effect for a number of years, the company recently entered into a contract with Monterey Gas Transmission, an interstate pipeline, for a new gas supply exceeding 700 million cf per day for 25 years at a relatively firm price. Deliveries are scheduled to start late in 1962. Subject to the outcome of pending rate cases, earnings for 1961 should approximate $1.60 a share, compared with $1.51 reported last year. Dividends of $0.27½ quarterly are the minimum expectation. *Considering the liberal yield available and the growth potential, the stock is attractive for immediate income and gradual capital gains.*

● Interstate Power provides utility services in relatively small communities in Iowa, Minnesota and Illinois. The economy of the territory is basically agricultural, which generally makes for relatively stable operations. The heavy residential-rural and commercial loads suggest that revenues will maintain their long upward trend and foster moderately higher earnings. For 1961, profits should equal or moderately exceed the $1.19 a share reported on fewer shares last year. A moderate increase in the $0.23¾ quarterly dividend is possible late in the year. Payments have been increased in each year since 1953. *Providing a generous return, this stock is a sound medium for conservative investment purposes.*

● Marine Midland Corp. — Through offices in over 100 communities, subsidiary banks of this holding company serve a diversified territory that includes most of the major industrial areas of New York State, as well as large agricultural regions. Real estate and installment loans are an important part of the business, and the record is one of gradually rising earnings. For this year, operating net on a larger capitalization is expected to hold close to the $1.87 a share of 1960. An improving trend should be seen as the year progresses, leading to measurably higher earnings for 1962. Dividends of $0.25 quarterly are supplemented with an annual 2½% stock dividend. *Reasonably priced, the shares are well suited for investment accounts seeking income combined with long-term appreciation.*

● Texas Gulf Sulphur is the world's largest producer of sulphur. Construction has begun on a $30 million potash mine and plant in Utah to have an annual capacity of over one million tons. These facilities, which should be completed by the end of 1962, will make Texas Gulf the largest domestic potash producer. Sulphur tonnage sales in 1961 are expected to at least equal those of 1960, and, with prices firmer, dollar volume should climb slightly. Margins are expected to widen as an increasing portion of sulphur sales is made in the low-cost molten form. Earnings should compare favorably with the $1.37 a share of 1960, which included a non-recurring credit of $0.10. Maintenance of dividends at $0.25 quarterly is anticipated. *With long-term prospects enhanced by current development of the rich Utah potash reserves, the shares are an attractive holding.*


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patients feel better
• Lethargy relieved by mild,
nonamphetamine stimulant

STEEL GROUP IN IMPROVED POSITION

Average Operating Rate of 75% Seen Over Next 12 Months Should Permit Satisfactory Profits—Group Likely to Outperform Market

Market prospects are brightening for leading steel equities. More pronounced demand for steel in recent weeks has carried industry operations up to 71% of capacity, the highest level in a year. While improvement over the next month may only be gradual followed by the usual seasonal dip in the summer months (when many major steel-using industries curtail operations for vacations and model changeovers), steel demand in the final half of the year should be high enough to enable producers to operate at an average rate of 75%. Further improvement is envisaged for the first half of 1962.

The more favorable outlook for the steel industry primarily results from the upturn in the general economy, which is expected to become more pronounced over coming months. The oft-mentioned inventory position of steel users should also enhance steel shipments. For more than a year, inventories have been declining, reflecting ready availability of the metal after strike-caused shortages were eliminated and reduced requirements stemming from the recession. Now most industry customers are buying for current needs, plus modest inventory rebuilding. Inventory accumulation will probably be quite pronounced by early 1962 as customers again hedge against the possibility of a strike when the present union contracts expire in mid-1962. These factors could readily allow steel output in the 12 months starting July 1, 1961, to range from 110 million to 120 million tons. Output for calendar 1961 will probably approximate last year's 99 million tons because of the depressed first quarter.

With higher demand, a boost in steel prices seems likely over the coming months, although the average increase will be much less than the $4.50 a ton effected in the final half of 1958 (the last general increase), since competitive pressure may well preclude any near-term advances in certain products. These include tinplate and stainless steel which are facing strong competition from aluminum, as well as merchant wire products and concrete reinforcing bars which have already lost a sizable portion of their markets to imports.

The leverage of higher volume, along with

LEADING STEEL EQUITIES

*Issue	EARN. $ PER SH. 1960	EARN. $ PER SH. E1916	INDIC. DIVD. $	1961 PRICE RANGE	APPROX. PRICE	‡P-E RATIO
Acme Steel	0.61	1.25	0.40	23¼-17	23	18.4
Allegheny Ludlum	2.25	2.75	2.00	48½-35	44	17.1
Armco Steel	4.76	4.25	3.00	77½-67⅝	76	18.1
Bethlehem Steel	2.52	2.60	2.40	49⅜-39⅞	45	18.5
Carpenter Steel	[1]3.51	[1]2.00	1.20	52¼-39⅝	47	24.5
Colorado Fuel & Iron	d0.41	—	Nil	23½-14¼	19	—
Copperweld Steel	2.08	1.75	2.00	41⅞-31¼	38	23.4
Crucible Steel	0.19	1.25	0.80	26⅞-17⅛	23	20.0
Granite City	2.59	2.50	1.40	51⅝-35½	50	20.4
Inland Steel	2.68	2.75	1.60	49¼-40½	47	17.4
Jones & Laughlin	4.04	3.50	2.50	73⅝-56½	69	20.6
§Kaiser Steel	d3.49	—	Nil	39½-23	36	—
§McLouth Steel	4.51	—	Nil	52¾-38¼	53	—
National Steel	5.53	4.75	3.00	91¼-80	96	19.2
Republic Steel	3.36	3.25	3.00	65¾-53¾	63	19.7
U. S. Steel	5.16	5.00	3.00	91¼-75½	86	17.6
Wheeling Steel	3.14	3.00	3.00	54⅞-42⅝	52	18.0
Youngstown Sheet & T.	7.38	7.00	5.00	114¾-88⅞	110	16.0

* Listed on New York Stock Exchange unless otherwise noted. § Over the counter. E—Estimated. d—Deficit. ‡ Based on 1961 estimated earnings. [1] Years ended June 30.



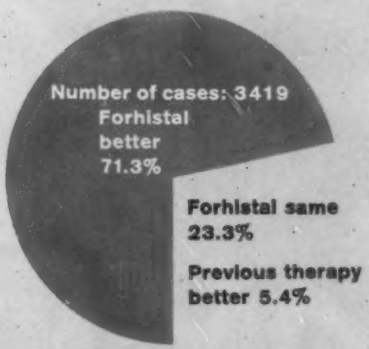


Report

Allergy and pruritus treated with new Forhistal®...a report on 6181 cases

Following initial clinical investigational work, Forhistal was sent to physicians throughout the country for evaluation as an antiallergic and antipruritic agent in everyday practice. Results in 6181 cases reported have now been analyzed. In 3419 cases a comparison was made between Forhistal and previous therapy. Results are shown below.
Information about the investigational work done previously is being mailed to you and is also available on request.

Compared with previous therapy
Forhistal rated better in 7 out of 10 cases of allergy and/or pruritus

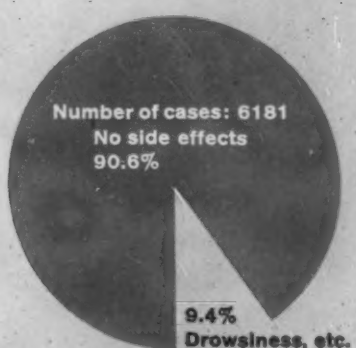


Response to treatment in allergic and/or pruritic disorders
Marked to moderate relief in more than 8 out of 10 cases

Forhistal brings marked to moderate relief of allergic and/or pruritic symptoms in 5230 out of 6181 patients

Diagnoses	No. of Cases	Relief: Marked to Moderate	Relief: Slight	Relief: None
Respiratory Allergies	3333	2790 (83.7%)	328 (9.8%)	215 (6.5%)
Allergic Dermatoses	1898	1624 (85.6%)	163 (8.6%)	111 (5.8%)
Pruritus	848	734 (86.6%)	72 (8.5%)	42 (4.9%)
Miscellaneous	102	82 (80.4%)	10 (9.8%)	10 (9.8%)
Totals	6181	5230 (84.6%)	573 (9.3%)	378 (6.1%)

Side effects
None reported in 9 out of 10 cases



See the Therapeutic Guide at the end of this documentary section for complete information about indications, dosage, precautions, and side effects of Forhistal.

CIBA
Report

Photomicrographs show how antihypertensive action of Ismelin® increases arteriole caliber



BEFORE ISMELIN: Photo shows normal arteriole in rat mesentery. (100X)



AFTER ISMELIN: Arteriolar caliber has significantly increased, while an adjacent capillary has filled. (100X)

The pronounced dilating effect Ismelin exerts on blood vessels (as shown above) is manifested clinically by a significant reduction in blood pressure of patients with hypertension. Page and Dustan* report, for example, that Ismelin lowered standing blood pressure to normotensive levels in 17 of 18 patients (94.4%) with hypertensive cardiovascular disease.

*Page, I. H., and Dustan, H. P.: J.A.M.A. 170:1265 (July 11) 1959.

iSMELIN® sulfate (guanethidine sulfate CIBA)

For complete information about Ismelin (including dosage, cautions, and side effects), see 1961 Physicians' Desk Reference or write CIBA, Summit, N. J.

selective price increases and gains in efficiency resulting from continued heavy investment in new and improved plant facilities, points to favorable steel industry profits over the next year. Obviously, record earnings cannot be anticipated for most companies, since employment costs under the current union contracts have already risen an estimated $4 to $5 a ton (before taxes) and a further increase of $2 to $2.50 a ton goes into effect next October.

With market interest switching from the so-called "glamour" issues to equities providing a sizable potential for cyclical recovery, steel stocks as a group could readily outpace the market over coming months. Particular issues having the greatest appeal are those with outstanding earnings leverage at an industry operating rate of 75% of capacity or higher, as well as equities still more depressed in price than the over-all steel group.

● ARMCO STEEL usually operates about 5% to 10% above the industry average, reflecting its strong market position and well-located plants. It produces both carbon and stainless grades of steel and has an excellent record of new product development. The raw material position is impressive, especially with taconite pellets (obtained from the 50%-owned Reserve Mining Affiliate) supplying an increasing portion of over-all iron ore requirements. A major capital program is under way to improve and expand finishing facilities and allow the eventual integration of the National Supply division's operations. While 1961 earnings will probably be down to about $4.25 a share from $4.76 in 1960 because of the slow first quarter, prospects for the final half and for 1962 are quite impressive. If a prolonged steel industry strike should develop next year, the impact on Armco would be less severe than average, since about half of its capacity is in plants with independent unions. *The stock is one of the better-quality steel issues.*

● NATIONAL STEEL'S profit margins are generally among the best in the industry, reflecting a favorable product mix, a strong position in raw materials, and efficient steelmaking and finishing facilities. A $300 million capital

program (being largely completed in the current year) substantially enhances the earnings potential. A new finishing mill in the steel-deficient Chicago area should expand the company's share of the over-all steel market and should allow greater operating economies at the Detroit works (which supplies semi-finished steel to the new mill), especially with installation of a high-speed hot strip mill and oxygen steelmaking furnaces. The automobile and container industries are the chief markets, with sizable tonnage also going to the construction, appliance, and machinery fields. While 1961 earnings will probably be down to $4.75 to $5 a share from $5.53 in 1960 because of lower shipments to the auto industry and start-up costs, *the longer-range potential is outstanding among the major steel companies.*

● ACME STEEL—This Chicago-based company producer of flat-rolled steel converts a sizable portion of its output into strapping, stitching wire, and related products. The Acme-Newport subsidiary produces pipe and plate as well as hot and cold-rolled sheet; kitchen cabinets and furniture are made by the Geneva and Howell divisions. These latter operations continue to be quite profitable, but consolidated results have been depressed over the past year by nonrecurring losses at the Chicago works stemming from the major capital improvement program. The losses resulted from a prolonged start-up period at the new oxygen steelmaking plant and from installation of a new rolling mill which replaced what was previously the company's largest mill. An easing in these costs, plus improved volume, restored operations to a profitable level in the month of March, and considerable improvement is anticipated over the rest of the year. With a fuller profits contribution from the new facilities, earnings in late 1961 could reach an annual rate of $3 a share. *The stock has considerable speculative appeal for substantial percentage appreciation.*

● CRUCIBLE STEEL is a leading producer of stainless, tool and other high alloy steels, and some carbon grade steels. A major plant improvement program over the past year de-



DIANABOL®

Mrs. K. S., 73, has osteoarthritis and osteoporosis. Steroids and analgesics gave only moderate relief; weight loss continued. Within a week after Dianabol was started, "symptomatic improvement had begun." Patient gained strength, agility and sense of well-being. (Photograph used with permission of the patient.)

Why most arthritic patients feel much better on Dianabol:

- Dianabol improves general physical condition[1]
- Dianabol helps restore a sense of well-being[2]
- Dianabol augments the beneficial effects of salicylates, corticosteroids, etc.[1,3,4]
- Dianabol counteracts the catabolic effects of corticosteroids[5-7]

References: 1. Kuzell, W. C., and Naugler, W. E.: Paper presented at the Annual Meeting of the American Rheumatism Association, Hollywood-By-The-Sea, Florida, June 9-11, 1960. 2. Gingrich, G. W.: Clinical report to CIBA. 3. Clark, G. M.: Paper presented at the Seventh Interim Session of the American Rheumatism Association, Dallas, Texas, Dec. 10, 1960. 4. Clark, G. M., Kaplan, S., Goobar, J., and Mills, D.: Arthritis and Rheumatism 4:106 (Feb.) 1961. 5. Tillis, H. H.: Clin. Med. 8:274 (Feb.) 1961. 6. Vignos, P. J., Jr., Abbott, W. E., Post, R. S., and Levy, S.: J. Lab. & Clin. Med. 56:954 (Dec.) 1960. 7. Abbott, W. E.: Research report to CIBA.

For complete information about Dianabol (including dosage, cautions, and side effects), see 1961 Physicians' Desk Reference or write CIBA, Summit, N. J.

DIANABOL® (methandrostenolone CIBA)

Report

Hypertension of over 12 years relieved with Esidrix®



With Esidrix, Mr. S. was able to conduct his business activities and enjoy his customary fishing trips without discomfort or apprehension.



Photos used with permission of the patient.

H. S., a 48-year-old salesman, had been suffering from labile hypertension for over 12 years. Both phenobarbital and rauwolfia had failed to stabilize his blood pressure. Reserpine and chlorothiazide brought some control, but side effects were troublesome. On May 5, 1959, feeling unusually tense, nauseated and dizzy, Mr. H. S. visited his physician.

Work-up disclosed blood pressure of 210/120 mm. Hg, a trace of pretibial edema, heart slightly enlarged to the left, coronal headache, normal urinary function and blood chemistry, and essentially normal EKG. The physician prescribed Esidrix (to be taken with orange juice), and recommended continuation of unrestricted salt diet.

Blood pressure of 210/120 reduced to 140/90 with Esidrix

Date	Therapy	Blood Pressure (mm. Hg)	Observations
5/5/59	Esidrix (taken with orange juice)	210/120	Dizzy, headache.
5/15/59	Esidrix (salt added to diet)	210/120	Muscle cramps.
5/22/59	Esidrix	160/90	Patient greatly improved.
6/5/59	Esidrix	148/90	Improvement maintained. Headaches, dizziness, nausea gone.
6/19/59	Esidrix	140/90	
6/26/59	Esidrix (KCl substituted for orange juice because of gastric distress)	140/90	Patient feels well, but somewhat weak.
7/3/59	Esidrix	140/90	Patient no longer weak; continues to feel well.

Esidrix® (hydrochlorothiazide CIBA)
for edema and hypertension

For complete information about Esidrix (including dosage, cautions, and side effects), see Physicians' Desk Reference or write CIBA, Summit, N. J. /ESIDRIX-1

pressed profits (1960 net was only $0.19 a share) because of heavy charges incurring in replacing the hot strip mill and from closing marginal facilities. With volume picking up and nonrecurring expenses largely over, an improving level of profits is anticipated over the course of 1961, especially as full benefits are realized from the new facilities. *The stock, previously recommended at a lower price, still has speculative appeal, especially as market interest becomes more pronounced in the secondary steel issues.*

● JONES & LAUGHLIN, through an ambitious plant improvement and expansion program, has improved its competitive position and materially expanded its earnings potential in periods of strong steel demand. Thus, while first-quarter profits were a depressed $0.28 a share, results in the current quarter should be well above the $0.62½ quarter dividend, and substantial improvement is likely in the final half. As operations get above 70% of capacity, the profits contributions from the Cleveland and Pittsburgh plants give substantial leverage to consolidated earnings, which in periods of depressed operations are largely derived from the highly efficient Aliquippa works. If industry output is no more than 75% of capacity over the next 12 months, J&L's earnings should run from $6 to $7 a share; a sharply higher potential is indicated at 80% as the large new oxygen steelmaking furnaces at the Cleveland works get into full operation. *A bull market favorite, the stock offers further appreciation potentials.*

● WHEELING STEEL offers considerable leverage (both as to capitalization and productive capacity per share) for cyclical improvement. Output consists of hot and cold rolled sheet, tinplate and black plate, and galvanized products; buttweld pipe is also made. Plant improvements have been accented in recent years.

The information set forth herein has been obtained from sources believed to be reliable, but its accuracy and completeness are not guaranteed.

Because of the time-lag created by the mechanics of magazine publishing, investors should consult daily papers for the latest prices.

Clinical Report

Lethargy due to illness overcome with RITALIN®



Mrs. R. R. had a partial oophorectomy and lysis of adhesions on October 10, 1960. Postoperatively, she developed an acute respiratory infection followed by acute gastroenteritis. Ordinarily an active, industrious woman, Mrs. R. was left weak and depressed by this siege of illness.

To overcome the lingering lethargy, her physician prescribed Ritalin. He reports: "Within 24 hours she was a changed person. Forty-eight hours later she called me up and thanked me for these 'wonderful tablets'...." Mrs. R. is busy again at home and has resumed her job as a piecework seamstress.

Photograph used with permission of the patient.

See the Therapeutic Guide at the end of this documentary section for complete information about indications, dosage, cautions, and side effects of Ritalin. a/2067MK

While the breakeven point is considerably higher than for the major steel companies, earnings prospects at the level of industry operations envisaged over the rest of 1961 are quite impressive. Thus, while the losses incurred in January and February may hold 1961 earnings close to the $3 dividend, *the stock has speculative possibilities.*

STOCKS IN THE LIMELIGHT

● Transamerica Corp. has offered to exchange 58 shares of a new 4½% convertible preferred stock for each 100 shares of Pacific Finance Corp. common outstanding. The $100 preferred would be callable at $105 only after three years; each share would be convertible into 2.84 shares of Transamerica common, equivalent to a price of $35.15 per share of the latter. This exchange would permit conversion of 100 shares of Pacific Finance into 165 shares of Transamerica common. The offer is conditioned upon acceptance by at least 80% of Pacific common, and will be tax-free. Lockheed Aircraft holds 22½% of the Pacific stock and is presumed ready to accept the offer, which appears to be mutually beneficial.

Transamerica's wholly-owned Occidental Life Insurance, the fifth largest stock life insurance company in the country, has an excellent growth record and favorable prospects. The market value of this holding alone was recently estimated at about $33 per Transamerica share, which approximates the market price of the latter. Other holdings include American Surety, Pacific National Fire, a large real estate company and additional investments, which together might be valued at approximately $10 per Transamerica share. Acquisition of Pacific Finance, which has been approved by the directors, would give Transamerica a promising investment in the expanding consumer finance business and additional



P.K.'s blood pressure response improved — with reduced thiazide dosage — when SINGOSERP® was added

P.K., a postal employee, had marked blood pressure elevation (average, 218/139 mm. Hg), Grade II to III fundi. He had taken whole root rauwolfia without response. On chlorothiazide and mecamylamine, the patient's blood pressure dropped to near-normal levels (average, 140/104 mm. Hg), but he complained of several side effects including nocturia. Adding Singoserp to the regimen permitted elimination of mecamylamine, and ⅔ reduction in chlorothiazide dosage. In a little over a month, blood pressure reached even lower levels than previously (average, 120/94 mm. Hg), changes in fundi were reversed to Grade I, and side effects were no longer experienced. Photograph used with permission of the patient.

insurance interests. Successful consummation in no way detracts from the attractiveness of Transamerica common as a reasonably priced growth situation.

● SPERRY RAND has been an extremely strong market performer recently, rising to an all-time high. The primary factor in the sharp advance apparently has been the growing belief that the company's extensive electronic data processing operations finally have been placed on a firm footing. Current indications are that these activities, which have produced sizable losses for several years, will reach the break-even point late in 1961. Aided by this situation, as well as by an expected recovery in other lines, earnings for the fiscal year ending March 31, 1962, seem likely to be materially above the depressed $1.00 a share estimated for the year before. Based on the rapidly growing number of installations of the company's computers and allied equipment, the contribution to earnings of this apparatus could begin to experience sizable expansion in subsequent years. At present, however, the growth prospects of most of Sperry's other lines, which continue to represent a major portion of its business, do not appear nearly so promising. Under the circumstances, current share prices would seem to take adequate recognition of Sperry's progress in the data processing field.

● The stock of Bell & Howell, adding strongly to its earlier gains, hit a new high of 68⅞ recently, more than 40% above its 1961 low. The company has steadily improved its position in the growing photographic industry, and in 1960 had the highest dollar sales in the movie equipment field, despite a decline in industry volume. Since the 1960 merger with Consolidated Electrodynamics, Bell & Howell has become an important factor in electronics as well. About 50% of 1960 sales were derived from non-photographic lines (data processing, analytical, recording and measuring instruments, and mailing and other business machines).

While earnings progress in the first quarter of 1961 may have been impaired to some extent by industry-wide conditions of high retail

Study shows SINGOSERP® increases control of blood pressure, improves symptomatic response, decreases thiazide dosage

Bare* reports marked improvement in blood pressure response and symptomatic relief when a tablet containing Singoserp and hydrochlorothiazide was substituted for hydrochlorothiazide alone in 63 elderly, hypertensive patients. This occurred despite a decrease of 25 mg. in the daily dose of hydrochlorothiazide during combination therapy.

	Mean Blood Pressure (mm. Hg)		Side Effects					
			Dyspnea		Dizziness		Headache	
	Systolic	Diastolic	No.†	%	No.†	%	No.†	%
Before treatment	187	111	36	57.2	45	71.5	48	76.2
During treatment with 50 mg. hydrochlorothiazide b.i.d.	162	96	12	19.1	18	28.5	12	19.1
During treatment with 25 mg. hydrochlorothiazide plus 1 mg. Singoserp t.i.d.	154	88	9	14.3	6	9.5	1	1.6

†Number of patients

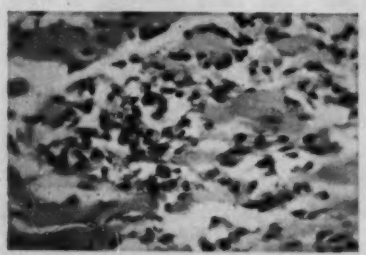
(Adapted from Bare*)

*Bare, W. W.: J. Am. Geriatrics Soc. 8:795 (Oct.) 1960.

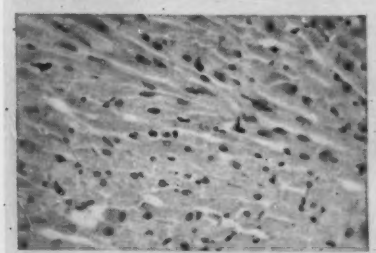
See the Therapeutic Guide at the end of this documentary section for complete information about indications, dosage, cautions, and side effects of Singoserp.

CIBA Report

SERPASIL® protects laboratory animal against stress-induced heart damage



Severely damaged heart muscle of a rat given 2-α-methyl-9-α-fluorohydrocortisone and stressed (restraint). (After Raab et al[1])



Undamaged heart of a rat given 2-α-methyl-9-α-fluorohydrocortisone and stressed as above, but also given Serpasil (0.4 microgram daily for one week). (After Raab et al[1])

Note: While Serpasil did not completely protect the hearts of all animals in this study, it greatly reduced myocardial damage in most of them. Original magnification of photomicrographs above: approximately 450X.

Raab et al[1] suggest that stress may damage heart tissue by stimulating discharges of the potentially necrotizing catecholamines, epinephrine and norepinephrine. These catecholamines, Raab[3] contends further, can cause heart damage and dysfunction in hypertensive patients—even after blood pressure has been brought under control. The ability of Serpasil to deplete catecholamines from the myocardium,[4] which Raab believes explains the heart-protecting effect shown in the photomicrographs above, may also guard hypertensive patients against cardiac damage. Complete information about this added benefit of Serpasil in the treatment of hypertension will be sent on request.

1. Raab, W., Stark, E., and Gigee, W. R.: Unpublished data. 2. Raab, W., Stark, E., and Gigee, W. R.: Circulation 20:754 (Oct.) 1959. 3. Raab, W.: Hormonal and Neurogenic Cardiovascular Disorders, The Williams & Wilkins Company, Baltimore, 1953, pp. 457-475. 4. Carlsson, A., Rosengren, E., Bertler, A., and Nilsson, J.: Psychotropic Drugs, edited by Garattini, S., and Ghetti, V., Elsevier Publishing Company, Amsterdam, 1957, pp. 363-372.

See the Therapeutic Guide at the end of this documentary section for complete information about indications, dosage, precautions and side effects of Serpasil.

/6013R

inventories and lagging demand for photographic products, subsequent improvement in these operations and further gains in electronics sales point to full-year results around $1.50 a share, up from $1.37 in 1960. Strong emphasis on research and development of new products, both in photographic and electronics lines, and the possibility of further diversification in the over-all communications field enhance the outlook for further growth. The shares are a sound long-range holding.

Georgia-Pacific Corp. was a persistent strong spot recently, responding to the generally improved outlook for the plywood and lumber industries. The recent $4 per thousand feet increase in plywood prices posted by leading producers is expected to have a beneficial effect on 1961 margins and profits. Fir plywood prices recently are about 20% above the lows of the past several months. Earnings in 1961 are tentatively expected to reach $3 or more a common share, up from last year's $2.39. The dividend may remain at the conservative $0.25 quarterly, plus occasional extras in stock.

The company's acquisitions of timber in recent years have lifted reserves above 15 billion board feet, excluding 7½ billion near Juneau, Alaska. The company also has a growing position as a producer of kraft pulp, paper and container board. Acquisition of W. M. Ritter Co. late in 1960 added among other properties some coal and natural gas reserves. The investment stature of the issue has thus been improved. The stock, recently at 72 (N.Y.S.E.) is worthy of retention for its long-term potentialties.

REPORT FOR INVESTING PHYSICIANS

● SOCIALISM—Tests applied by the Interior Department in recommending hydroelectric projects include potential increases in surrounding land value, the value of added recreational facilities, and the value of new crops that could be grown in the project area.

Nothing could better illustrate the reason for inevitable failure, but not necessarily defeat, of socialism. Taxpayers finance facilities

CIBA Reports Therapeutic Guide

DORIDEN® (glutethimide CIBA)

Nonbarbiturate Daytime and Night-time Sedative

Indications and dosage: *Night-time Sedation:* 0.5 Gm. at bedtime. May be taken again when needed but not less than 4 hours before rising. *Daytime Sedation:* 0.125 to 0.25 Gm. t.i.d. after meals. *Preoperative Sedation:* 0.5 Gm. the night before surgery; 0.5 to 1 Gm. 1 hour before anesthesia. *First Stage of Labor:* 0.5 Gm. at onset of labor. May be repeated if needed.

Caution: As with other sedatives, emotionally disturbed patients who may receive Doriden over prolonged periods should be observed carefully for possible signs of dependence, even though this occurs only rarely. To minimize withdrawal reactions, dosage should be reduced gradually.

Side effects: Side effects are minimal. Skin rash may occur occasionally, in which case Doriden should be withdrawn.

Supplied: *Tablets,* 0.25 Gm. (white, scored), 0.5 Gm. (white, scored); bottles of 100, 500, 1000. *Tablets,* 0.125 Gm. (white); bottles of 100. *Capsules,* 0.5 Gm. (blue and white).

FORHISTAL® maleate (dimethpyrindene maleate CIBA)

A New Agent for Allergy and Pruritus

Description: Forhistal is a new, low-dosage antiallergic and antipruritic agent which relieves symptoms in a wide range of allergic and pruritic disorders. Forhistal, as clinical evidence shows, is well tolerated in patients of all ages.

Indications: *Respiratory allergies:* seasonal and perennial rhinitis, vasomotor rhinitis, bronchial asthma, etc. *Ocular allergies,* especially those accompanying hay fever. *Allergic dermatoses:* urticaria, angioneurotic edema, dermatitis medicamentosa. *Pruritic dermatoses:* for relief of itching, as an adjunct to other therapy in management of atopic and contact dermatitis, etc.

Average dosage: Adults and children over 6 years of age: *Lontabs*—1 Lontab once or twice daily. *Tablets*—1 or 2 tablets 1 to 3 times daily. *Syrup*—1 or 2 teaspoons 1 to 3 times daily. Children under 6 years of age: *Pediatric Drops*—0.25 mg. (0.3 ml.) to 0.5 mg. (0.6 ml.) 2 or 3 times daily.

Side effects: The principal side effect reported is some degree of sedation or drowsiness. Other side effects, which have occurred infrequently, are dryness of mouth, gastrointestinal discomfort, nausea or diarrhea, excessive stimulation, insomnia or irritability, dizziness, headache, bladder discomfort and increased nocturia.

Supplied: *Lontabs,* 2.5 mg. (orange); bottles of 100. *Tablets,* 1 mg. (pale orange, scored); bottles of 100. *Syrup* (pink), containing 1 mg. Forhistal maleate per 5-ml. teaspoon; bottles of 4 fluidounces. *Pediatric Oral Drops* (pink), containing 0.5 mg. Forhistal maleate per 0.6 ml.; bottles of 1 fluidounce, with droppers calibrated for delivery of 0.3 or 0.6 ml.

LONTABS® (long-acting tablets CIBA)

RITALIN® hydrochloride (methylphenidate hydrochloride CIBA)

Stimulant-Antidepressant

Indications and dosage for oral Ritalin: Whenever lethargy is a problem—as in menopause, senility, oversedation, mild depression, and convalescence—Ritalin safely restores physical and mental activity within normal physiologic limits. Dosage depends upon indication and individual response. Many patients respond to 10 mg. b.i.d. or t.i.d. Others may require 20-mg. doses; in a few cases, 5-mg. doses will be adequate.

Contraindications: Agitated depression. However, patients in this state have responded very well to a combination of Serpasil and Ritalin, since optimal doses of both drugs can be given with fewer side effects.

Side effects: Side effects have usually been minimal. Among complaints mentioned have been nervousness, insomnia, and a few cases of anorexia, nausea, dizziness, palpitation, headache, and drowsiness. Very rarely blood pressure and pulse changes, both up and down, have been recorded. A small number of patients, particularly those with an element of agitation, may react adversely to Ritalin; in these cases medication should be discontinued.

Supplied: *Tablets,* 5 mg. (yellow) and 10 mg. (light blue); bottles of 100, 500 and 1000. *Tablets,* 20 mg. (peach-colored); bottles of 100 and 1000.

Information on the use of parenteral Ritalin (indications, dosage, cautions, and side effects) sent on request.

SERPASIL® (reserpine CIBA)

Antihypertensive and Heart-Protecting Agent

Indications and dosage: Serpasil reduces blood pressure in patients with mild to moderate hypertension. It is especially useful in anxious, tense patients, and in those with tachycardia—for it exerts a calming effect, imparts a sense of well-being, and tends to normalize the heart rate. In addition, Serpasil depletes catecholamines from the heart; it may thereby protect hypertensive patients against catecholamine-induced heart damage.

Serpasil may be used alone or in combination with other antihypertensive agents. In the average patient not receiving other antihypertensives, the average initial dose is two 0.25-mg. tablets daily, with a range of 0.1 to 1 mg. Continue for at least a week. If results prove satisfactory—as they will in many cases—no other medication is necessary. For maintenance, the dose should be reduced to 0.25 mg. or less daily. If the response to Serpasil alone is inadequate, other agents such as Esidrix, Apresoline, or Ismelin may be added to the regimen.

Caution: During anesthesia, significant hypotension and bradycardia have been observed in hypertensive patients being treated with Serpasil. If possible, Serpasil should be withdrawn from such patients 2 weeks prior to elective surgery. If an emergency operation is required, vagal blocking agents should be given parenterally to prevent or reverse hypotension and/or bradycardia.

Because Serpasil may increase gastric secretion, it should be used with caution in patients with a history of peptic ulcer.

Side effects: The side effects of Serpasil are characteristic of all rauwolfia preparations. Because of its sedative action, some patients may experience lassitude or mild drowsiness, especially during the period when the dosage is being adjusted. This usually disappears when the optimal dosage level has been attained. Nasal stuffiness or congestion of varying degree occurs occasionally and may be alleviated by use of a suitable topical vasoconstrictor. Increased frequency of defecation and/or a tendency to looseness of stools may occur occasionally. Other side effects, rarely observed, include anorexia, headache, nausea, and dizziness.

A very few patients taking Serpasil have developed moderate to severe "depression." When the drug is discontinued, depression usually disappears, but active treatment including hospitalization for shock therapy has been required in some cases. Adjunctive use of mood-elevating agents such as Ritalin is often sufficient to relieve *mild* depression.

In general, it is preferable to administer Serpasil after meals in order to obviate the discomfort due to possibly increased gastric secretion.

Supplied: *Tablets,* 0.1 mg. (white), 0.25 mg. (white, scored) and 1 mg. (white, scored); bottles of 100, 500, 1000 and 5000.

Information on the use of parenteral Serpasil (indications, dosage, cautions, and side effects) sent on request. *(turn page)*

[0904H

CIBA Reports **Therapeutic Guide (cont'd)**

SINGOSERP® (syrosingopine CIBA)
Lowers Blood Pressure—
Usually Without Rauwolfia Side Effects

Indications and dosage: For mild to moderate hypertension, including pre-eclampsia and essential hypertension associated with pregnancy. The suggested initial dose is 1 to 2 tablets (1 to 2 mg.) daily in single or divided doses. Some patients may require and will tolerate 3 or more tablets daily. Since Singoserp has both a gradual onset and prolonged duration of effect, a trial of at least 2 weeks with the starting dose is indicated for the proper evaluation of results. The dose for long-term maintenance therapy in most cases will range from ½ to 3 tablets (0.5 to 3 mg.) daily. In more resistant cases, Esidrix, Apresoline, or Ismelin may be used in combination with Singoserp—in lower dosages than when they are used alone.

Caution: Since rauwolfia preparations are known to stimulate the secretion of gastric fluids, caution should be exercised in administering Singoserp to patients with peptic ulcer and to those with histories suggestive of this disorder.

Marked hypotension has been reported in patients undergoing anesthesia while being treated with conventional rauwolfia drugs. Therefore, it may be desirable to reduce or discontinue the dosage of Singoserp several weeks prior to an elective procedure.

Side effects: The side effects of Singoserp are less frequent and milder than those of conventional rauwolfia drugs. Nasal congestion, usually mild, occurs occasionally and may be relieved by use of a suitable topical vasoconstrictor. Other side effects which occur even less frequently are gastric irritation, drowsiness, fatigue, nausea, headache, emotional depression, skin rash, restlessness, and anxiety.

Reports of emotional depression associated with the use of Singoserp have been rare and therefore difficult to interpret. Moreover, a number of patients manifesting symptoms of depression during treatment with conventional rauwolfia drugs either have not had a recurrence of these symptoms or have actually experienced relief of them when given Singoserp in doses producing adequate control of blood pressure.

Supplied: *Tablets*, 1 mg. (white, scored); bottles of 100 and 1000.

C I B A SUMMIT, N. J. /2005M

aimed in part at raising additional crops, which will add to the farm surpluses that already pose a staggering financial problem to those same taxpayers.

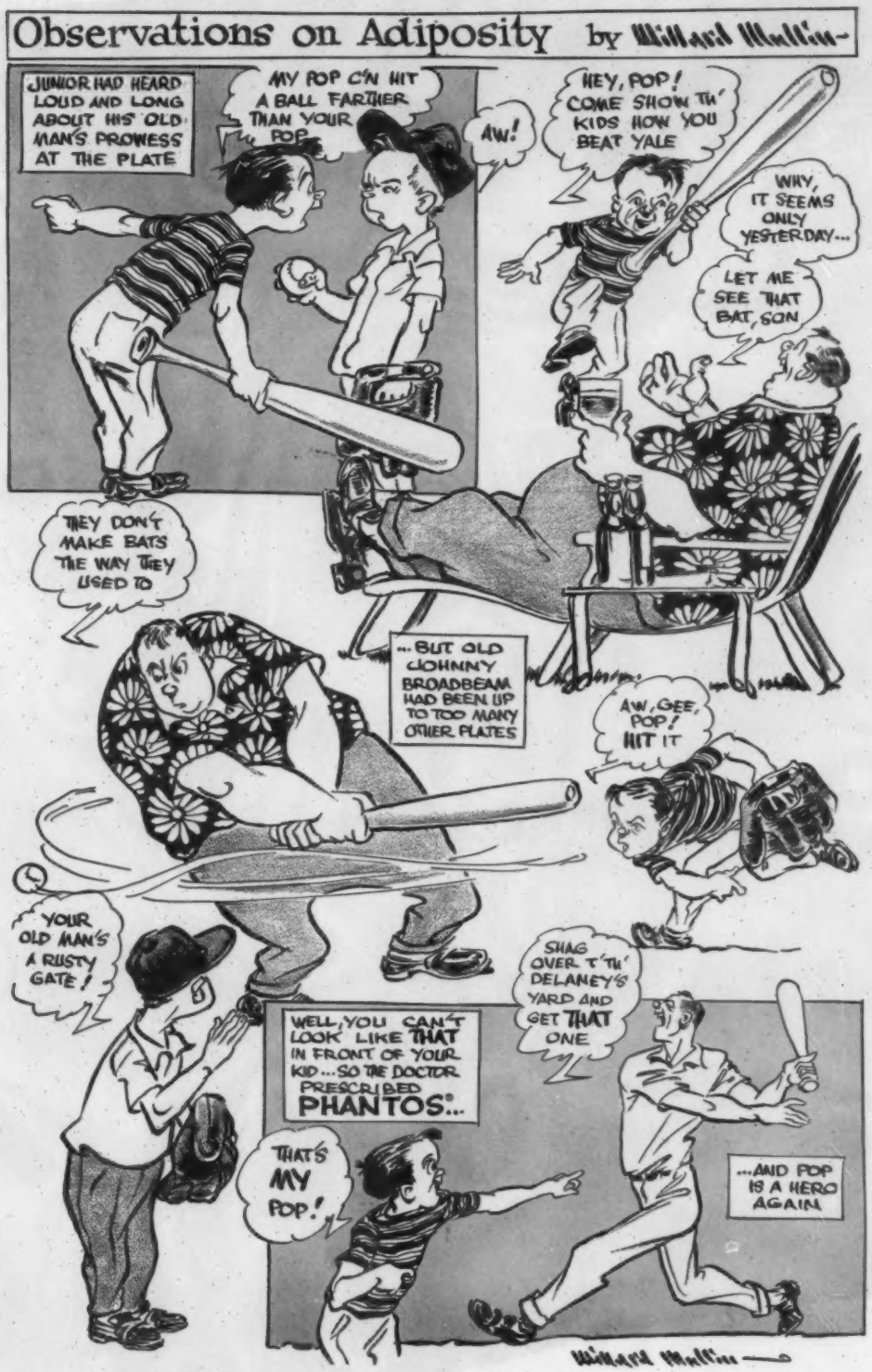
● DEFENSE ORDERS, which took up part of the slack in the private sector of the economy during the recession, are still running well above year-earlier levels. Indications are that such contracts will continue to be a strong positive force, in view of the Administration's stepped-up military and space program.

For the first nine months of the fiscal year ended June 30, 1961, contracts let by the Defense Department for aircraft, missiles, ships, ordnance, electronics, etc., totaled $11.2 billion, a 23% jump over the major procurement obligations for the corresponding period of fiscal 1960. Biggest increases were in missiles, electronics and communications, and ordnance, vehicles and related equipment. Reflecting the long lead time between the contract award and production stages, actual expenditures were down 5%, to $11.0 billion from $11.6 billion.

Nevertheless, an upturn in obligations acts as a progressive stimulus as the successful bidders complete their planning, place orders for materials and equipment, and finally increase their employment as production gets under way. A sizable portion of defense work trickles down to subcontractors, diffusing the benefits.

● HOUSING—Builders and lending institutions question that the reduction in the maximum interest rate on new FHA home mortgages to 5¼% from 5½%, the second, cut this year, will stimulate the building industry to any great extent. It is said to have psychological value, but, in the absence of a strong underlying demand, might lead to a widening of the discounts on FHA loans. Prospective home buyers seem more interested in no-down-payment 40-year mortgages, one of the features of the Administration's housing program now nearing enactment.

In any event, the general trend of residential construction is gradually upward. Private housing starts for 1961 are expected to exceed last year's 1,237,800 units.



PHANTOS® anti-obesity capsules—a product of Cooper, Tinsley Laboratories, Inc., Harrison, N. J.
Samples and literature upon request.



the first complete physiologic regulator of female cyclic function

ENOVID®

(brand of norethynodrel with ethynylestradiol 3-methyl ether)

The basic action

ENOVID closely mimics the balanced progestational-estrogenic action of the functioning corpus luteum. This action is readily understood by a simple comparison. In effect, ENOVID *induces a physiologic state which simulates early pregnancy — except that there is no placenta or fetus.* Thus, as in pregnancy, the production or release of pituitary gonadotropin is inhibited and ovulation suspended; a pseudodecidual endometrium ("pseudo" because neither placenta nor fetus is present) is induced and maintained. Further, during ENOVID therapy, certain symptoms typical of normal pregnancy may be noted in some patients, such as nausea — which is usually mild and disappears spontaneously within a few days — breast engorgement, some degree of fluid retention, and often a marked sense of well-being. There is no androgenicity. ENOVID *is as safe as the normal state of pregnancy.*

The basic applications

1. Correction of menstrual dysfunction. *Cyclic* therapy with ENOVID controls dysfunctional uterine bleeding (menorrhagia, metrorrhagia) and often establishes a normal menstrual cycle in amenorrhea.

2. Ovulation suppression (to suspend fertility). For this purpose ENOVID is administered *cyclically,* beginning on day 5 through day 24 (20 daily doses). The ovary remains in a state of physiologic rest and there is no impairment of subsequent fertility. Continuous administration for more than two years is not recommended.

3. Postponement of the menses for reasons of health (impending hospitalization for surgery, during treatment of Bartholin's gland cysts, acute urethritis, rectal abscess, trichomonal or monilial vaginitis), travel, forthcoming marriage, or pressing business or professional engagements. For this purpose ENOVID may be started at any time in the cycle up to one week before expected menstruation. Upon discontinuation, normal cyclic bleeding occurs in three to five days.

4. Threatened abortion. *Continuous* ENOVID treatment provides balanced hormonal support for the endometrium in threatened or habitual abortion.

5. Endocrine infertility. ENOVID has been used successfully in *cyclic* therapy of endocrine infertility, promoting subsequent pregnancy through a probable "rebound" phenomenon.

6. Endometriosis. *Continuous* therapy with ENOVID corrects endometriosis by producing a pseudodecidual reaction with subsequent absorption of aberrant endometrial tissue.

The basic dosage

Basic dosage of ENOVID is 5 mg. daily in *cyclic* therapy, beginning on day 5 through day 24 (20 daily doses). Higher doses may be used with complete safety to prevent or control occasional "spotting" or breakthrough bleeding during ENOVID therapy, or for rapid effect in the emergency treatment of dysfunctional uterine bleeding and threatened abortion.

ENOVID is available in tablets of 5 mg. and 10 mg.

Literature and references, covering over five years of intensive clinical study, available on request.

SEARLE *Research in the Service of Medicine*

...unfettered

From the beginning, woman has been a vassal to the temporal demands—and frequently the aberrations—of the cyclic mechanism of her reproductive system. Now, to a degree heretofore unknown, she is permitted normalization, enhancement, or suspension of cyclic function and procreative potential. This new physiologic control is symbolized in an illustration borrowed from ancient Greek mythology—Andromeda freed from her chains.

The earlier peak rate of 1,531,300 units reached in 1959 is not likely to be topped for some time.

● COMMENTS OF THE TIMES—A complaint our field analysts have received from a number of companies is to this effect: "We wish people would buy our appliances and other products just as avidly as they are buying our shares."

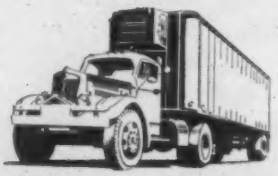
TRUCK OUTLOOK IMPROVING

Progressive improvement in sales and production seen, following slow start this year — Shares of Mack and White well situated

Although domestic truck production in the first four months of 1961 declined 26% from the unusually high level of early 1960, monthly comparisons are becoming progressively more favorable. Strong cyclical recovery is anticipated henceforth in line with mounting demand for trucks from commercial and industrial customers. Resultant improvement in profits should foster higher medium and longer-term market prices for the shares of favorably situated truck manufacturers.

Monthly comparisons of truck registrations were unfavorable on a year-to-year basis continuously from June through November 1960. However, retail sales were up sharply in December 1960, from the steel-strike depressed level a year earlier and the January, 1961, total was the best for that month since 1956, although the February figure trailed that of 1960. With prospects for such important customer fields as heavy construction, highway transportation, and agriculture improving and with truck inventories believed to be well below year-earlier levels, the future production outlook appears promising.

Truck output for the second quarter should be about 13% below that a year earlier, but second-half production probably will exceed the comparable 1960 total. Altogether, commercial vehicle assemblies for 1961 may be approximately 10% less than the 1.2 million of last year. Longer-range prospects are enhanced by the rising trend of truck scrappage; an estimated 600,000 or more trucks were scrapped in 1960, or roughly two-thirds of the total number registered during the year. Growth over the past decade has been especially favorable in heavy-duty vehicles of over



26,000 pounds. In this category, INTERNATIONAL HARVESTER, MACK TRUCKS, and WHITE MOTOR probably account for about 70% of the total market.

● MACK TRUCKS—Unit production in the first four months of 1961 declined 34% from the similar period of 1960. Progressive recovery is anticipated, with comparisons late in the year likely to be favorable. Still, sales for 1961 as a whole should be at least moderately below the reduced $260 million of 1960. This, together with special expenses in connection with transferring the manufacture of major component parts from Plainfield, N. J., to a new one million square foot facility at Hagerstown, Md., could reduce earnings for 1961 to $3.50 or less a share from $4.10 last year. Dividends are $0.45 quarterly.

Although expenses relative to starting up the new plant should be restrictive through the first quarter of 1962, benefits from the new unit thereafter should be substantial, since wage rates will be much lower, the work force smaller, and materials handling greatly improved. *With earnings for 1962 likely to expand materially, the stock of this highly-integrated truck producer posseses promising intermediate capital gain potentials if it can be bought at about 45 (N.Y.S.E.).*

● WHITE MOTOR—Truck production in 1961's first four months was down 18% year-

ANNOUNCING... A POTENT ANTIDEPRESSANT WITH EFFECTIVE ANTI-ANXIETY PROPERTIES...

NEW

ELAVIL®

AMITRIPTYLINE HYDROCHLORIDE

MSD

new...a potent antidepressant with effective anti-anxiety properties

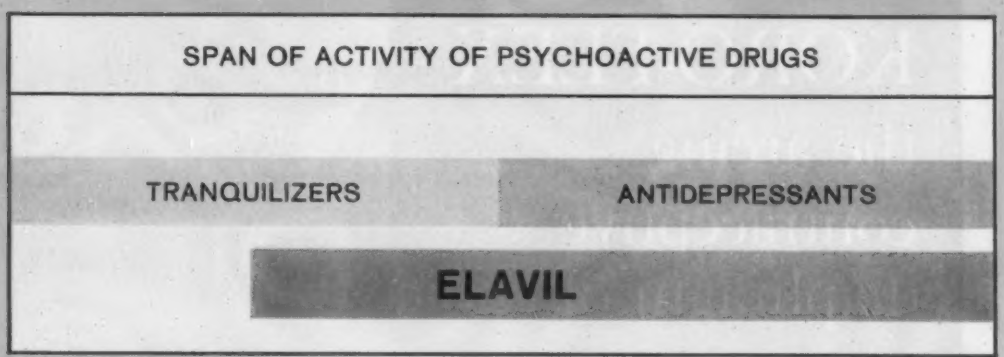
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AMITRIPTYLINE HYDROCHLORIDE

RELATIVE UTILITY IN MANAGEMENT OF DEPRESSED PATIENTS				
	TARGET SYMPTOMS OF DEPRESSION:			
Class of compounds	*Anxiety*	*Insomnia*	*Depression*	*Over-all relief of symptoms*
TRANQUILIZERS	"Failure of the tranquilizers to produce satisfactory results is due in many cases to their being prescribed for depression, especially depression masked by the more prominent symptoms of anxiety. The underlying depression may be deepened."[1]			+ −
ANTIDEPRESSANTS			"CNS stimulants and anti-depressants, if given to anxious patients, will increase the anxiety...."[1]	+
ELAVIL	"... this drug [ELAVIL] acted both as a tranquilizer and as an anti-depressant...."[2] Many physicians customarily treat anxious or depressed patients with a combination of an antidepressant and a tranquilizer. This is seldom necessary when prescribing ELAVIL because it has both antidepressant and anti-anxiety properties.			++

AVIL®

effective in patients with depression...
particularly useful in those with predominant symptoms of anxiety and tension...provides prompt relief of anxiety and insomnia associated with depression



INDICATIONS: manic-depressive reaction – depressed phase; involutional melancholia; reactive depression; schizo-affective depressions; neurotic depressive reaction; and these target symptoms: anxiety; depressed mood; insomnia; psychomotor retardation; functional somatic complaints; loss of interest; feelings of guilt; anorexia. May be used whether the emotional difficulty is a manifestation of neurosis or psychosis,[4] and in ambulatory or hospitalized patients.[3, 4, 5]

USUAL ADULT ORAL DOSAGE: Initial, 25 mg. three times a day, until a satisfactory response is noted. Many patients improve rapidly, although some depressed patients may require four to six weeks of therapy before obtaining maximum benefit. In severely depressed patients, as much as 150 mg. per day may be given. **Maintenance,** 25 mg. two to four times a day. Some patients may be maintained on 10 mg. four times a day. The natural course of depression is often many months in duration. Accordingly, it is appropriate to continue maintenance therapy for at least three months after the patient has achieved satisfactory improvement in order to lessen the possibility of relapse, which may occur if the patient's depressive cycle is not complete. In the event of relapse, therapy with ELAVIL may be reinstituted.

ELAVIL is not a monoamine oxidase (MAO) inhibitor. No evidence of drug-induced jaundice or agranulocytosis has been noted. Side effects (drowsiness, dizziness, nausea, excitement, hypotension, fine tremor, jitteriness, headache, heartburn, anorexia, increased perspiration, and skin rash), when they occur, are usually mild. However, as with all new therapeutic agents, careful observation of patients is recommended. As with other drugs possessing significant anticholinergic activity, ELAVIL is contraindicated in patients with glaucoma.

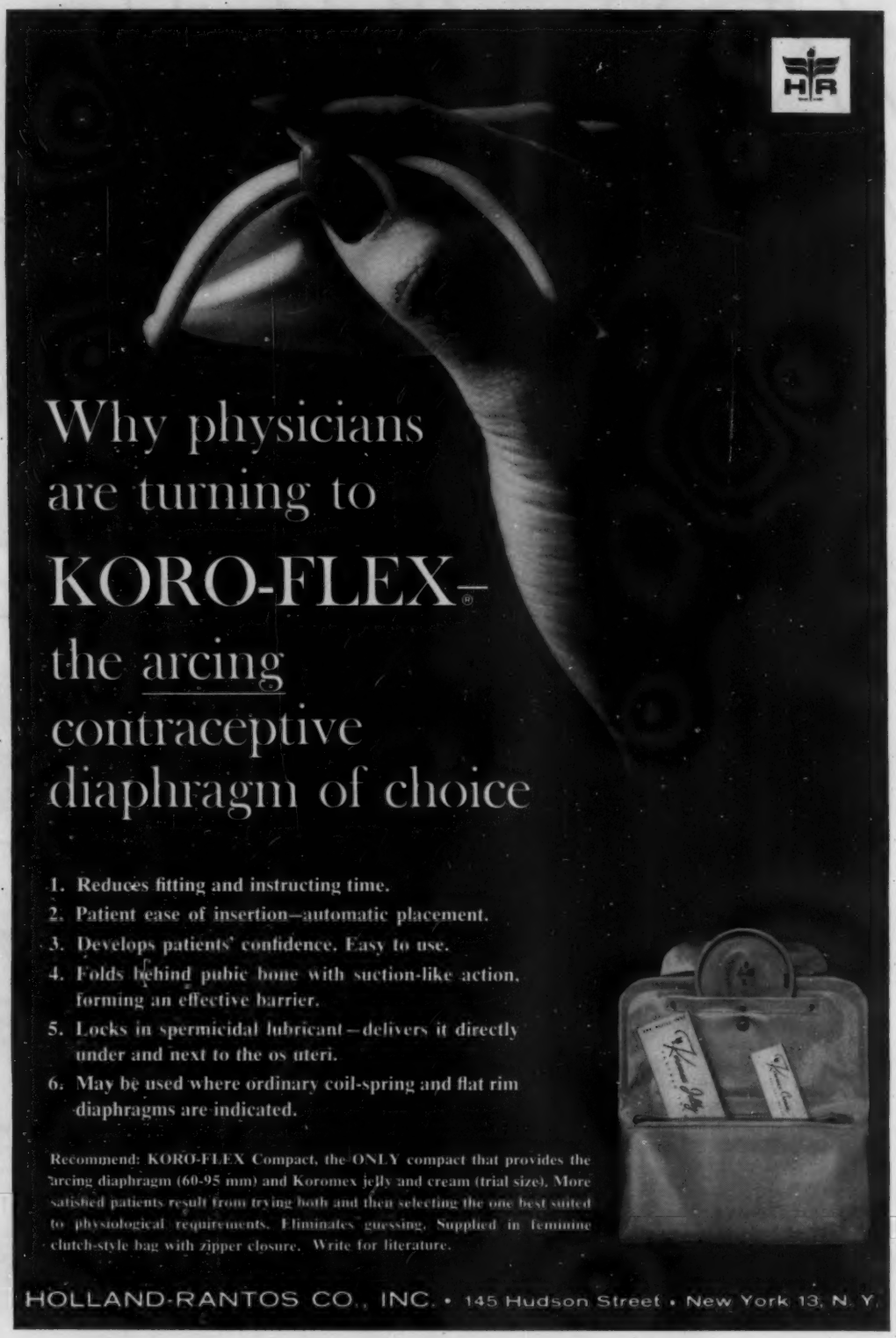
SUPPLY: Tablets, 10 mg. and 25 mg., in bottles of 100. **Injection** (intramuscular), 10 mg. per cc., 10-cc. vials.

REFERENCES: 1. Perloff, M. M., and Levick, L. J.: Clinical Med. 7:2237, Nov. 1960. 2. Freed, H.: Am. J. Psychiat. 117:455, Nov. 1960. 3. Dorfman, W.: Psychosomatics 1:153, May-June 1960. 4. Ayd, F. J., Jr.: Psychosomatics 1:320, Nov.-Dec. 1960. 5. Barsa, J. A., and Saunders, J. C.: Am. J. Psychiat. 117:739, Feb. 1961.

Before prescribing or administering ELAVIL, the physician should consult the detailed information on use accompanying the package or available on request.

MSD MERCK SHARP & DOHME, DIVISION OF MERCK & CO., INC., WEST POINT, PA.

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Why physicians are turning to KORO-FLEX®– the arcing contraceptive diaphragm of choice

1. Reduces fitting and instructing time.
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3. Develops patients' confidence. Easy to use.
4. Folds behind pubic bone with suction-like action, forming an effective barrier.
5. Locks in spermicidal lubricant—delivers it directly under and next to the os uteri.
6. May be used where ordinary coil-spring and flat rim diaphragms are indicated.

Recommend: KORO-FLEX Compact, the ONLY compact that provides the arcing diaphragm (60-95 mm) and Koromex jelly and cream (trial size). More satisfied patients result from trying both and then selecting the one best suited to physiological requirements. Eliminates guessing. Supplied in feminine clutch-style bag with zipper closure. Write for literature.

HOLLAND-RANTOS CO., INC. • 145 Hudson Street • New York 13, N. Y.

Now arthritic flare-ups can be controlled with much lower steroid dosages

With Somacort to relax muscles and relieve pain, tender joints need far less steroid to reduce inflammation

Somacort is a safe, logical step-up in treatment during the rough days when your patients need more than salicylates to keep comfortable and active.

Soma, by itself, benefits many arthritics by relieving the muscle spasm and pain which arise from joint inflammation. Thus with Somacort, which combines Soma with prednisolone, the amount of steroid needed to control inflammation[1] can be kept within more conservative limits.

Somacort is well tolerated even when used for long-term therapy in more serious cases.

1. Wein, A. B.; The Use of Carisoprodol (SOMA) in Orthopedic Surgery and Rehabilitation, Miller, James G., ed., Wayne State University Press, Detroit, Michigan, 1959.

Recommended dosage: 1 or 2 tablets q.i.d. (Each tablet contains 350 mg. carisoprodol, 2 mg. prednisolone)

SOMACORT™

(*carisoprodol, Wallace, with prednisolone*)

Wallace Laboratories, Cranbury, New Jersey

GUIDE FOR INVESTORS

Based on recommendations of the Securities and Exchange Commission in cooperation with the New York Stock Exchange, American Stock Exchange, National Association of Securities Dealers and others.

1. Think before buying, guard against all high pressure sales.

2. Beware of promises of quick spectacular price rises.

3. Be sure you understand the risk of loss as well as prospect of gain.

4. Get the facts—do not buy on tips or rumors.

5. Give at least as much thought when purchasing securities as you would when acquiring any valuable property.

6. Be skeptical of securities offered on the telephone from any firm or salesman you do not know.

7. Request the person offering securities over the phone to mail you written information about the corporation, its operations, net profit, management, financial position and future prospects.

to-year, and first-quarter earnings fell to $0.70 a share from $1.23. However, the backlog of truck orders has increased 65% since January, pointing to significant recovery in coming months. The farm equipment business acquired from Oliver Corp. last November will be included in 1961 sales.

Although total sales will be well ahead of the $283 million in 1960, narrower margins in the forepart of the year, heavier interest charges, and a larger number of common shares outstanding suggest that earnings for 1961 may not vary markedly from the $3.87 a share (based on a weighted average of outstanding shares) of 1960. A noteworthy advance in profits is projected for 1962. Dividends are $0.50 quarterly. *In view of this aggressive company's strong position in the growing heavy truck field and increasing diversity, the reasonably valued stock, recently at 58 (N.Y.S.E.), should prove to be a rewarding commitment.*



DEFENSIVE ISSUES STILL STRONG

Notwithstanding speculative excesses around the fringes, notably in new and unlisted issues, the underlying tone of the stock market has been more orderly than appears on the surface. Defensive issues, which are generally of good quality, have continued to turn in the best relative showings, as they have for the past year or so. Still displaying better-than-average strength are finance companies, small loans, corn refiners, packaged foods, food chains, cigarettes, natural gas distributors, telephone, and life and casualty insurance.

Few groups have failed to participate in this year's strong market. Outstanding exceptions have been electrical equipment and electric household equipment, both depressed because of price-fixing convictions. Electronics, fertilizer, motion pictures, and office equipment

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How to invest in last half 1961 and in America's growth years ahead

Will feature Standard & Poor's Forecast of stock market for balance of 1961 and beyond. Forecast of changing Business Conditions. *EXCLUSIVE! These dynamic new S&P "Buy" lists:*

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- **10 Active Growth Stocks**
- **3 Special Situations to Buy for Profit**
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MT-7/61

have been strong spots among the specialties. There has been some revival of interest in the more cyclical groups, but this has been selective. Among those moving ahead faster than the general market have been carpets and rugs, steam generating machinery, metal fabricating, and rail equipment. On the other hand, such bellwether groups as agricultural machinery, autos, auto parts, rails, steel, and tires have turned in only average performances. As business recovery reaches a more advanced stage, we would expect a stronger demand to develop for some of the laggard cyclical issues.

For this reason, we are upgrading our relative market position ratings on automobiles, auto trucks, chemicals, coal, sulphur, and textile weavers. Also raised are soft drinks, international oils, and food chains. On the other hand, sugar cane refiners are in the Least Attractive category.

APPEAL OF STOCK GROUPS MEASURED AGAINST THE MARKET

Presented below is our appraisal of the performances likely to be turned in by leading stock groups relative to the general market over the next six months or so. The objective should be to switch out of the least attractive categories into those expected to make a more favorable market showing.

MOST FAVORABLY SITUATED

Aircraft Manufacturing	Chemicals	Machinery (Industrial)	Oil (International)
Automobiles	Electronics	Machinery	Publishing
Auto Trucks	Insurance (Casualty)	(Steam Gen.)	Soft Drinks
Building (Cement)	Insurance (Fire)	Office Equipment	Sulphur
Building	Mach. (Const. &	Oil (Crude Producers)	Textile Weavers
(Roof. & Wallbd.)	Matl. Hand.)	Oil (Integrated	
		Domestic)	

DEFENSIVE ISSUES

Banks	Dairy Products	Natural Gas	Small Loan Companies
Biscuit Bakers	Drugs	Distributors	Telephone
Confectionery	Finance Companies	Retail Trade	Tobacco (Cigarettes)
Corn Refiners	Foods—Packaged	(Food Chains)	Utilities (Electric)

AVERAGE

Air Transport	Electrical Equipment	Meat Packing	Retail Trade
Aluminum	Elec. Household	Metal Fabricating	(Dept. Stores)
Apparel	Appliances	Motion Pictures	Retail Trade
Auto Parts	Fertilizers	Natural Gas Pipe	(Mail Order)
Brewing	Flour Millers	Lines	Retail Trade
Building (Heat., Air	Foods—Canned	Paper	(Variety Chains)
Cond. & Plumb.)	Insurance (Life)	Radio-TV Broadcasters	Shoes
Coal (Bituminous)	Investment Companies	Radio-TV	Soaps
Containers	Machine Tools	Manufacturers	Steel
(Metal & Glass)	Machinery	Rail Equipment	Sugar (Beet Refiners)
Containers (Paper)	(Agricultural)	Railroads	Tires & Rubber Goods
Copper	Machinery (Oil Well)	Rayon & Acetate Yarn	Tobacco (Cigars)
Distilling	Machinery (Specialty)	Retail Apparel Chains	

LEAST ATTRACTIVE

Bread & Cake Bakers	Gold Mining	Sugar	Sugar (Cane Refiners)
Carpets & Rugs	Lead & Zinc	(Cane Producers)	Vegetable Oils

what TWISTON does for your allergy patient

TWISTON®

roloxamine

takes him out of this class: zzzzzzzzzz zzzzzzzzzzzzzzz zzzzzzzzzzzzzzz

puts him into this class: !!!!!!!!!!!!!!!! !!!!!!!!!!!!!!!!!!!!!!!!!!!! !!!!!!!!!!!!!!!!!!!!!!!!!!!!

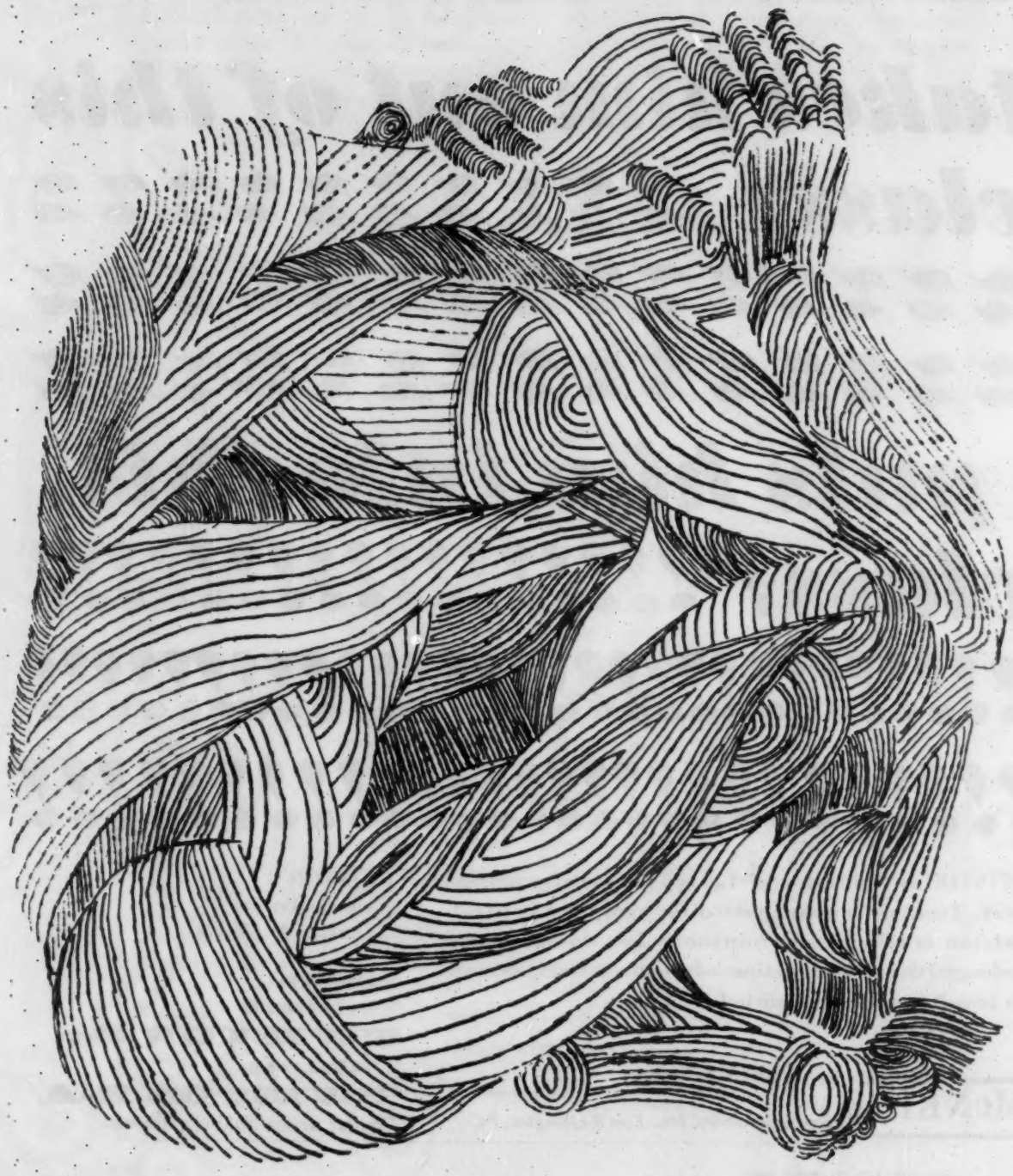
TWISTON is "tailor-made" to keep your allergy patient alert. Twiston is unsurpassed for symptom control. Twiston is effective in *unusually* low dosage: has a prolonged duration of action—drowsiness rarely occurs. No toxicity reactions reported.

TWISTON
. . . anti-allergic
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available as:
Tablets TWISTON, 2mg.
Tablets TWISTON R-A.
(Repeat Action Tablets), 4mg.

U.S. PATENT PENDING

McNEIL *McNeil Laboratories, Inc., Fort Washington, Pa.*



in musculoskeletal pain

steroid or salicylate?

Aristogesic®

Steroid-Analgesic Compound LEDERLE Capsules

provides the advantages of both

ARISTOGESIC is advantageous in the therapy of a wide range of musculoskeletal disorders, from mild to severe, because it combines the anti-inflammatory action of ARISTOCORT® Triamcinolone with the analgesic action of salicylamide. Aluminum hydroxide helps to control gastric distress and hyperacidity; and ascorbic acid compensates for loss of this essential vitamin. *Low, flexible dosage for highly individualized therapy / Well tolerated for prolonged periods / Single prescription at lower cost / Greater convenience of single capsules...*

INDICATIONS: Mild cases of rheumatoid arthritis, tenosynovitis, synovitis, bursitis, spondylitis, myositis, fibrositis, neuritis, and certain muscular strains.

PRECAUTIONS: Since this compound is designed to give relief at low steroid dosage, the risk of unwanted collateral hormonal effects such as Cushingoid manifestations, peptic ulcer and muscle weakness is relatively small. Still, the usual precautions pertaining to use of steroids in conditions in which they may be detrimental should be observed. This is particularly important in infections in which adverse effects are not dose-related. If reactions occur, discontinue drug and take appropriate measures. Each ARISTOGESIC Capsule contains: ARISTOCORT Triamcinolone, 0.5 mg.; Salicylamide, 325 mg.; Dried Aluminum Hydroxide Gel, 75 mg.; Ascorbic Acid, 20 mg.

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FOREIGN SALES A GOOD PROFITS SOURCE

Usually More Profitable Than Domestic Business—Growth Potential Promising — Investments Abroad Now Tending to Level Off

Investments abroad by American corporations, while still of substantial proportions, are showing signs of tapering off. Two factors are responsible. One is that expansion of productive capacity in markets with the best potentials has been so rapid that keener competition is now being encountered, with the result that profit possibilities are no longer quite so glowing as they were a few years ago.

The second consideration is President Kennedy's proposal for taxing the unremitted earnings of American corporations realized in economically advanced nations. The effect would be to eliminate a tax advantage with respect to reinvested earnings in countries with tax rates considerably lower than the United States 52% corporate rate. Even though there is considerable doubt concerning enactment, this program is having a sobering influence on plans for foreign expansion.

Emphasis on Direct Investments—Foreign operations in the postwar period have proved to be a bonanza for many American firms. Profit margins generally have been wider than could be realized on domestic sales, and markets have been growing at a good pace. The long-range potential is still considered favorable, based on the reasoning that, as economic progress continues, the rising standard of living in foreign nations will create demands for products and supplies already well established in the American way of life.

The trend has been for United States corporations to establish plants abroad, rather than to serve foreign markets by exports from this country. The major factor has been the much lower scale of wages abroad, which provides a decided competitive advantage in many instances over American-made goods. Although hourly wage rates in Europe have been rising faster than in the United States since 1953, the gap is still so wide that the catching up process can go much further. Other considerations have been intensified nationalism abroad and preferential treatment granted to companies setting up local plants.

Direct investments by U.S. interests were especially large in 1956 and 1957 because of new ventures in oil and mining in Canada and Venezuela. Thereafter the trend was strongly toward Western Europe as American enterprises sought to take advantage of (1) the high rate of economic growth in that area, (2) lower labor costs, and (3) tariff benefits in the six Common Market countries and the seven Free Trade Association nations.

Other Strong Areas—Currently, increasing interest is being shown in Japan and Australia. Japan's economic recovery has been spectacular, marked by a 16% rise in gross national product in the fiscal year ended April 1, 1960, and 11% in fiscal 1961. U.S. investments in Japan are still relatively moderate, partly because of exchange restrictions. These have just been eased, and some additional Japanese financing in the U.S. is planned following recent initial public offerings.

Australia is still a relatively young nation with large untapped resources and a marked upsurge in immigration. Attracted by the prospects for economic development, the inflow of capital has been large in the past year or two, including funds from U.S. industry.

Capital Flow to Latin America Off—Contrasted with the more highly industrialized nations, the Latin American countries still have to contend with the vexing problems of raw material exporting economies. Reflecting not only this condition, but also the nationalization of foreign investments in Cuba and signs of discontent elsewhere, the flow of United States funds into Latin America was cut in half last year.

Mexico and Venezuela, which have relatively rich natural resources, have exhibited nationalistic leanings. Colombia and Argentina, which are maintaining strict austerity programs, are

Take an "inside look" at a remarkable advance in topical steroid therapy

The unique base, Veriderm, combined with the outstanding anti-inflammatory steroid, Medrol, provides effective treatment of dermatoses.

Veriderm Medrol Acetate consists of Veriderm, a base closely approximating the composition of normal skin lipids, and Medrol Acetate, the highly effective, dependable corticoid.

Topical use of Veriderm Medrol Acetate produces symptomatic relief and objective improvement of dermatoses, and at the same time aids in correcting dry skin conditions. Veriderm Medrol Acetate, less greasy than an ointment and less drying than a lotion, is indicated in atopic, contact, or seborrheic dermatitis, and in neurodermatitis, anogenital pruritus, and allergic dermatoses.

Available in four formulations: Veriderm Medrol Acetate 0.25 % — Each gram contains: Medrol (methylprednisolone) Acetate 2.5 mg.; Methylparaben 4 mg.; Butyl-p-hydroxybenzoate 3 mg.; in a skin lipid base composed of saturated and unsaturated free fatty acids; triglycerol and other esters of fatty acids; saturated and unsaturated hydrocarbons; free cholesterol; high-molecular-weight alcohol; with water and aromatics. (Veriderm Medrol Acetate 1% is also available.)

For prophylaxis against secondary infection: Veriderm Neo-Medrol Acetate 0.25% — Each gram contains: Medrol (methylprednisolone) Acetate 2.5 mg.; Neomycin Sulfate 5 mg. (equivalent to 3.5 mg. neomycin base); Methylparaben 4 mg.; Butyl-p-hydroxybenzoate 3 mg.; in a skin lipid base composed of saturated and unsaturated free fatty acids; triglycerol and other esters of fatty acids; saturated and unsaturated hydrocarbons; free cholesterol; high-molecular-weight alcohol; with water and aromatics. (Veriderm Neo-Medrol Acetate 1% is also available.)

Administration: After careful cleansing of the affected skin to minimize the possibility of introducing infection, a small amount of either Veriderm Medrol Acetate or Neo-Medrol Acetate is applied and rubbed gently into the involved areas. Application should be made initially one to three times daily. Once control is achieved — usually within a few hours — the frequency of application should be reduced to the minimum necessary to avoid relapses. The 1% preparation is recommended for beginning treatment and the 0.25% preparation for maintenance therapy.

Contraindications: Local application of Veriderm Medrol Acetate or Neo-Medrol Acetate is contraindicated in tuberculosis of the skin and in other cutaneous infections for which an effective antibiotic or chemotherapeutic agent is not available for simultaneous application.

These preparations are usually well tolerated. However, if signs of irritation or sensitivity should develop, application should be discontinued. If bacterial infection should develop during the course of therapy, appropriate local or systemic antibiotic therapy should be instituted.

Supplied in 5 Gm. and 20 Gm. tubes.

Veriderm™

Medrol† Acetate

Neo-Medrol† Acetate

†TRADEMARK, REG. U. S. PAT. OFF.

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The Upjohn Company, Kalamazoo, Michigan

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Potent immobilizing and spermicidal action of the unique IMMOLIN matrix.



TRAPPED the viable, highly motile sperm becomes non-reproductive the instant it contacts the outer rim of the IMMOLIN Cream-Jel matrix.



KILLED AND BURIED —the dead sperm is trapped inside the IMMOLIN Cream-Jel matrix.

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Low pregnancy rates obtained[1-4] with IMMOLIN Vaginal Cream-Jel as sole contraceptive. No failures occurred in 311 patient-months in a clinical study still under way.[2] Recent digest of four other interim studies (over 1800 patient-months) reports only 3 pregnancies due to product failure.[3] Two completed studies (5146 patient-months) reveal the extremely low pregnancy rates of 2.01[4] and 3.2[1] per hundred woman-years of exposure.

"There has been good [patient] acceptance..."[2] IMMOLIN's dry consistency eliminates the usual complaints of overlubrication. IMMOLIN stays put, won't leak; it is non-messy, snowy-white and completely odorless. These advantages, plus simplicity of application, enhance motivation for consistent use.

Supplied: *#900 Package—75 gram tube with improved measured-dose applicator and attractive zippered plastic case.*
#905 Package— 75 gram tube only.

References: **1.** Finkelstein, R., and Goldberg, R. B.: Am. J. Obst. & Gynec. *78*:657 (Sept.) 1959. **2.** Marcus, S.: J. Am. M. Women's A. *16*:383 (May) 1961. **3.** Schmid Gynecologic Notes, a digest of interim clinical studies, Vol. 1, No. 1, October, 1960. **4.** Goldstein, L. Z.: Obst. & Gynec. *10*:133 (Aug.) 1957.

IMMOLIN is a registered trade-mark of Julius Schmid, Inc.

JULIUS SCHMID, INC. 423 West 55th Street, New York 19, N. Y.

The Upjohn Company, Kalamazoo, Michigan



attracting new private U.S. investments. Peru and Chile are struggling to create conditions conducive to foreign investment. Peru, with its diversified economy, is well in the lead.

In Brazil, where a large amount of industrial enterprise was developed by U.S. capital, the new administration has embarked on a belated stabilization program. This is being backed by a huge "aid package" from the United States and others. Initially, the agreement concluded in May, 1961, provides for new U.S. credits of $338 million, plus postponement of large repayments falling due in 1961-63, and other steps. These rescue operations have imparted new life to Brazil's failing financial position.

Although trends are mixed, foreign operations are still a source of growing profits to many American firms. Presented herewith are comments on seven companies.

● PROCTER & GAMBLE, the leading manufacturer of soaps and synthetic detergents and several well-known food products, continues to aggressively expand its overseas operations, which in fiscal 1959-60 accounted for about 22% of consolidated net income. Including the recently formed Chilean subsidiary, the company's products are now produced in 11 foreign countries and marketed in most nations of the free world. Meanwhile, the outlook for domestic operations remains favorable. Consolidated earnings in the fiscal year ending June 30, 1961, are again expected to reach a record peak of around $2.60 a share, up from $2.36 (adjusted for the recent 2-for-1 split) in the preceding year. Following the split, dividends were increased to $0.35 quarterly from $0.32½ (adjusted). *This stock is an attractive long-term investment.*

● TEXACO, INC., strongly situated in the domestic oil industry as one of the largest producers and marketers, also has important petroleum interests abroad. Almost half of the company's world-wide refinery runs are outside the United States, including about 75,000 barrels daily in Canada and about 235,000 barrels daily in Trinidad. Almost one-fourth of the company's refinery throughput is in the Eastern Hemisphere; about 70% of the latter is through the 50% owned Caltex companies. On a world-wide basis, the company's crude output is equal to more than 90% of refinery runs. Earnings in 1961 are estimated at about $6.75 a share, up from $6.34 a year before. After the 2-for-1 stock split, on which stockholders will vote on July 11, the equivalent cash dividend may be increased modestly; the rate on the present stock is $0.65 quarterly, plus $0.25 extra paid in 1960. *The stock has much to offer as one of the best of the petroleum equities, affording broad representation in this strategic industry.*

● COCA-COLA CO.—In 1960, this company, largest in the soft drink field, expanded its product line by the midyear introduction of its Fanta flavors in the United States and diversified even further when it merged at the year-end with Minute Maid, leading processor of frozen orange concentrate and maker of instant coffee and tea. Foreign operations account for about 40% of sales related to the company's soft drink business. New franchises are being established overseas, and current franchise holders there are more actively engaged in plant expansion than at any time in the past few years. Plans call for expansion of Minute Maid's overseas markets by building concentrate plants in Europe and South America at an estimated cost of $40 million. The program, to get under way possibly by 1962, will be spread over five to ten years. First-quarter operations this year were more profitable than in 1960, and the outlook favors a new sales peak and a rise in earnings from the $2.86 a share in 1960. Dividends of $0.60 quarterly are secure. *With the basic business in soft drinks expected to continue to grow, and potentials expanded by ventures into other fields, this stock ranks as a sound long-term investment.*

● HEINZ (H. J.) processes and packs an extensive line of high-quality foods. Its products are in such demand overseas that half of sales and two-thirds of net profits are derived from operations of foreign subsidiaries. Sales for the fiscal year ended April 30, 1961, are



IN SINUSITIS, COLDS AND UPPER RESPIRATORY DISORDERS

NEW DIMETAPP® Extentabs®

LET YOUR PATIENTS BREATHE EASIER!

ONE EXTENTAB PROVIDES CLEAR BREATHING FOR 12 HOURS — One long-acting DIMETAPP Extentab provides all-day or all-night relief from stuffiness, drip and congestion. Easier to use than nose drops or sprays, DIMETAPP contains a proved antihistamine, Dimetane, and two outstanding decongestants, phenylephrine and phenylpropanolamine, that reach into the areas topical medications can't touch, to relieve the annoying symptoms of sinusitis, colds and URI — without rebound congestion.

WITH EXCEPTIONAL FREEDOM FROM ANNOYING SIDE EFFECTS — With DIMETAPP Extentabs, there's little problem of either drowsiness or overstimulation. The antihistamine component, Dimetane, has been demonstrated to produce as few side effects as a placebo,* while the dosages of the decongestant components are small, yet fully effective.

DIMETAPP Extentabs contain Dimetane® (parabromdylamine [brompheniramine] maleate 12 mg., phenylephrine HCl 15 mg., and phenylpropanolamine HCl 15 mg. Dependable Extentab construction assures relief of symptoms for up to 12 hours with 1 tablet.

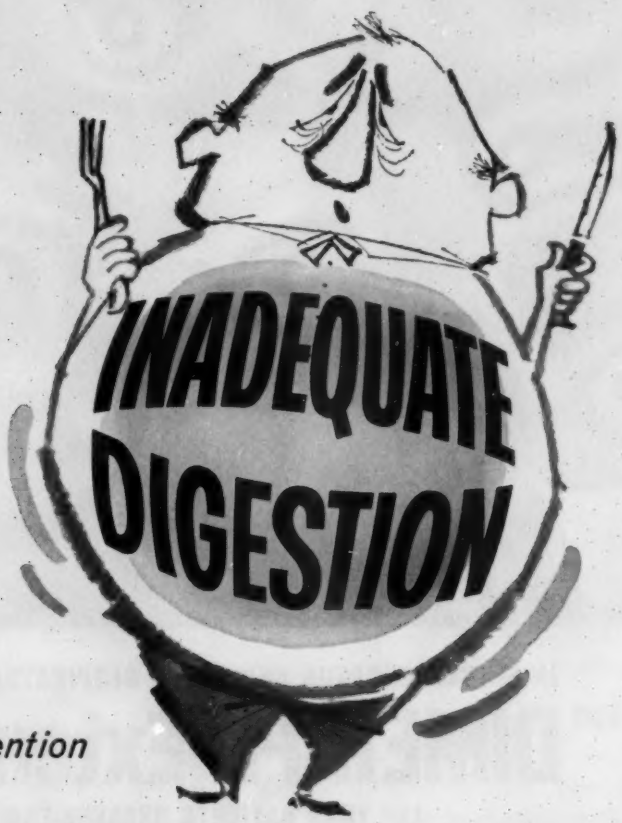
Dosage: Adults — 1 Extentab q. 8-12 hours. Children over 6 — 1 Extentab q. 12 hours. **Precautions:** In high dosage some drowsiness may infrequently occur from Dimetane. As with all preparations containing sympathomimetic amines, DIMETAPP should be administered with caution to patients with cardiac or peripheral vascular diseases or hyperthyroidism. **Contraindication:** patients sensitive to antihistamines. **Supplied:** bottles of 100 and 500.

*New England J. Med. 261:478, 1959
(Schiller, I. W. and Lowell, F. C.)

A. H. ROBINS CO., INC., RICHMOND 20, VIRGINIA

MAKING TODAY'S MEDICINES WITH INTEGRITY . . . SEEKING TOMORROW'S WITH PERSISTENCE

Helps to PREVENT the consequences of...



Postprandial pain and discomfort due to gas and distention

TRULASE®

Chewed or swallowed during meals, mixes intimately with food . . . acts physiologically without delay.

Each chewable TRULASE tablet contains: SMP-Standardized amylolytic enzyme* 30 mg., SMP-Standardized proteolytic enzyme** 6 mg., SMP-Standardized lipolytic enzyme*** 25 mg. Dosage: One or more tablets chewed during meals. Supplied: Bottles of 30 and 100. *from Aspergillus oryzae **from Carica papaya ***Lipase from Pancreatin 3X. Potency established prior to mixture with other ingredients.

Smith, Miller & Patch, Inc., New York 10, N.Y.

SHORTENS THE HEALING TIME... DIAPER RASH



Before application of A and D Ointment—Typical diaper rash with excoriation of skin.



After application of A and D Ointment—Diaper rash has completely disappeared within one week.

A and D OINTMENT

REG. T.M.

completely safe, highly effective—heals, soothes and protects / A and D Ointment both treats and prevents diaper rash. In seconds, it soothes painful irritated skin—starts to heal excoriation. It may be applied liberally at every diaper change, is eminently safe for even the most delicate tissues. Will not stain the skin or wash away in body secretions. Easily laundered from diapers or clothing. / A and D Ointment is also useful for pressure sores, varicose and chronic ulcers, nipple care (fissured nipples), episiotomy and circumcision wounds, eczema, detergent dermatitis, burns, wounds and skin abrasions.

Available: 1½ and 4 oz. tubes; 1 and 5 lb. jars. Also, A and D Ointment with Prednisolone, 10 and 25 gm. tubes.

WHITE LABORATORIES, INC. / KENILWORTH, NEW JERSEY

White

POSITION OF STOCKS

*ISSUE	EARN. $ PER SH. 1960	EARN. $ PER SH. E1961	INDIC. DIVD. $	1961 PRICE RANGE	APPROX. PRICE[6]	YIELD %
COCA-COLA	2.86	3.20	2.40	95½ - 77¾	92	2.6
HEINZ (H. J.)	[3]2.36	[3]2.75	1.00	71¼ - 49⅛	57	1.8
INTL. BUSINESS MACH.	6.12	—	2.40	493 -447	496	0.5
MINN. MNG. & MFG.	[3]1.38	[3]1.50	0.60	87 - 70⅛	85	0.7
OTIS ELEVATOR	2.95	2.75	1.50	79 - 56½	70	2.1
PROCTER & GAMBLE	[5]2.36	[5]2.60	1.40	93 - 73	78	1.8
TEXACO, INC.	6.34	6.75	†2.85	109¼ - 83	108	2.6

* Listed on New York Stock Exchange. E—Estimated. † Incl. extras. [3] Years ended Apr. 30. [4] Incl. foreign subsidiaries. [5] Years ended June 30. [6] Because of the time-lag created by the mechanics of magazine publishing, investors should consult daily papers for latest prices.

estimated at a new peak of about $370 million, up from $340 million, and earnings may have reached $2.75 a common share, also a new high, compared with $2.36 in fiscal 1959-60 (adjusted for 3-for-1 stock split in February, 1961). Despite the growth in competition, particularly overseas, Heinz is expected to maintain its strong trade position. The expansion in progress overseas will contribute to large over-all sales in 1961-62, and further operating economies suggest a new earnings peak. Dividends probably will continue at $0.25 quarterly for the time being. Acceleration of the company's growth may be accomplished by investing in new facilities or by acquiring existing companies either in part or entirely through an exchange of its common stock. *The shares are a sound long-term commitment.*

● INTERNATIONAL BUSINESS MACHINES is well known as the leading domestic manufacturer of electronic data processing equipment. However, the scope and rapid growth of its foreign operations, conducted through IBM World Trade Corp., generally are not nearly so well recognized. In 1960, this wholly-owned subsidiary reported record gross revenues of some $372 million. Net income for the year was $48.81 million (up 2.53-fold since 1955), of which $12.3 million was paid to the parent company in dividends (4.92 times 1955 payments). Prospects favor further significant growth for both the domestic and foreign operations in 1961 and beyond. *While this outlook is reflected in the liberal valuation placed on current earnings, IBM's high-quality shares still represent a sound commitment for those primarily interested in long-term capital appreciation.*

● MINNESOTA MINING & MANUFACTURING —Foreign sales of this diversified company (tapes and ribbons, graphic and electrical products, building materials, chemicals and plastics) have more than doubled in the five years through 1960, a period when domestic sales increased 31%. Share earnings in the first quarter of 1961 held at the year-earlier level ($0.32), as further gains in overseas business helped to offset a lag in demand in certain domestic markets and losses by some recently-acquired subsidiaries. Aided by important contributions from new products (including a surgical tape), full-year profits should rise to around $1.50 a share from $1.38 in 1960. The $0.15 quarterly dividend is secure. *This stock, as always, is priced high relative to current earnings, but is still an attractive growth issue, in view of the company's bright prospects.*

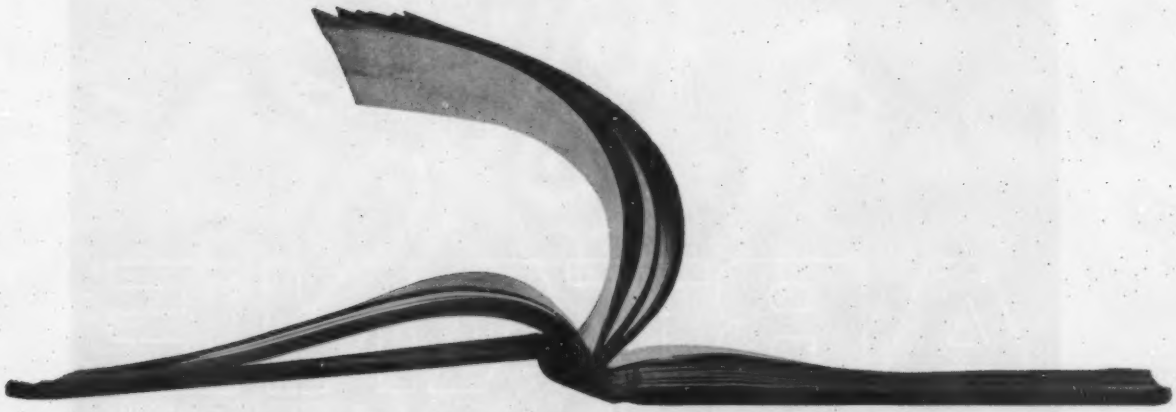
● OTIS ELEVATOR—This long-established company is by far the largest of the approximately 200 producers in the elevator and escalator field. The company is well situated to benefit from any expansion of major multiple dwelling construction in urban redevelopment programs, as well as office building construction. The Bowl-Mor pinsetting business will offset in part the loss of the Brunswick business. An attractive feature in the outlook is the substantial growth being experienced by the company's foreign subsidiaries. In 1960, dividends received from this source accounted

Dulcolax®

brand of bisacodyl tablets and suppositories

the laxative with a bibliography

Geigy



The extensive bibliography* on Dulcolax, amounting to almost 100 clinical reports, strongly affirms its clinical advantages.

Induces Natural Evacuation
The action of Dulcolax is based on simple reflex production of large bowel peristalsis on contact with the colonic mucosa. As a result, stools are usually soft and well formed and purgation is avoided.

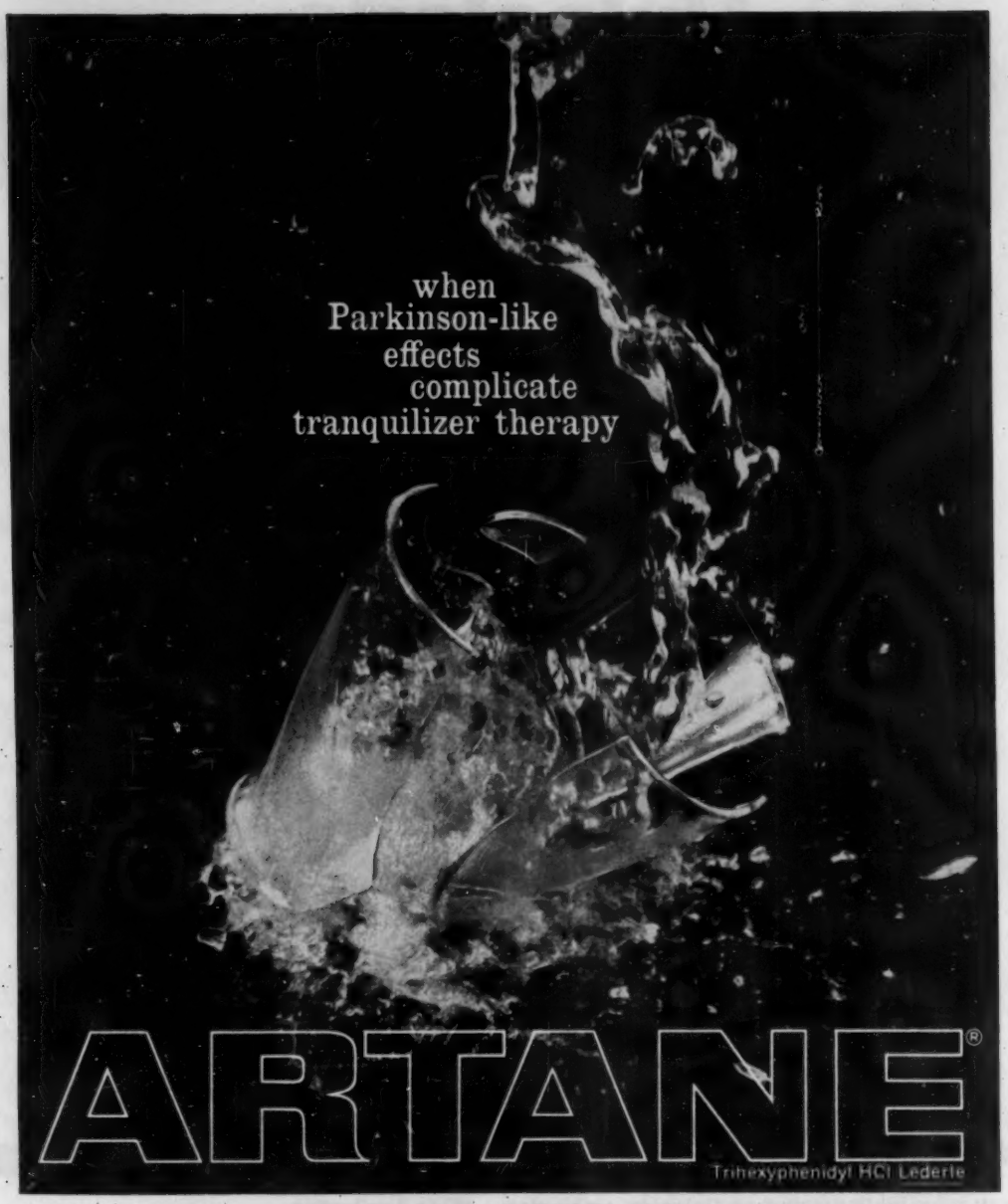
Predictable Action
With Dulcolax tablets action is almost invariably obtained overnight... with suppositories action occurs within the hour.

Wide Application
Dulcolax is as well adapted to preparation for radiographic and operative procedures as it is to the treatment of constipation.

*Detailed literature, including complete bibliography, available on request.

Dulcolax®, brand of bisacodyl: Tablets of 5 mg. and suppositories of 10 mg. Under license from C. H. Boehringer Sohn, Ingelheim.

Geigy Pharmaceuticals
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Widely used to control Parkinsonoid side effects of phenothiazine therapy, ARTANE is outstanding for sustained relief of rigidity and tremors, with little or no risk of further complications. ARTANE can often extend the usefulness of tranquilizers by minimizing the need to reduce or discontinue effective dosage. Supplied: Tablets, 2 mg. and 5 mg.; Elixir, 2 mg./5 cc. tsp.

Request complete information on indications, dosage, precautions and contraindications from your Lederle Representative or write to Medical Advisory Department.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



anorectal comfort ...that lasts

Patients want full, fast and lasting relief from the distressing symptoms of common anorectal disorders.

For hemorrhoids, proctitis and pruritus ani, *start therapy* with ANUSOL-HC—2 suppositories daily for 3 to 6 days—to reduce inflammation, relieve pain and itching, and shorten total treatment time. *Maintain patient comfort* with regular ANUSOL—1 suppository morning and evening and after each evacuation to prevent recurrence of symptoms. Supplement with Anusol Unguent as required.

Neither Anusol nor Anusol-HC contains anesthetic agents which might mask symptoms of serious rectal pathology.

anusol® | **anusol-HC®**

hemorrhoidal suppositories and unguent | *hemorrhoidal suppositories with hydrocortisone acetate, 10 mg.*

WARNER CHILCOTT

MORRIS PLAINS, N.J.

MS 12 Anusol of TEBRAL GELOBIL PROLOID PERITRATE BARBOLAMINE

for some 22% of total net income, and current indications favor continued gains in overseas operations. Earnings of the parent company for 1961 should hold reasonably close to the peak $2.95 a share of the year before. *Prospects further ahead are more favorably defined, and the shares are considered attractive for purposes of long-term appreciation.*

NATIONAL BISCUIT NET OFF SLIGHTLY

The biscuit industry is only now feeling the effects of the recession, suggesting that this leading company's 1961 earnings will not quite match the $4.10 a share reported for last year. Profit margins are being pinched by higher materials costs, particularly for shortenings and chocolate, and sales increases thus far have not been offsetting. Informed sources do not look for any significant improvement until well into the third quarter. Under the circumstances, no early increase in the $0.70 quarterly dividend may be forthcoming. The company and Cream of Wheat Corp. have agreed in principle on a consolidation, which may be completed in the next few months. This would greatly enhance the company's position in the breakfast food market, in which it is already well represented with Nabisco Shredded Wheat. Additional acquisitions are more likely to be in the biscuit field. With a new factory being built in Chicago, capital outlays this year will be stepped up to $20 million from the $11.3 million of 1960. *Priced recently at 80 (N.Y.S.E.) to yield 3.5% this Master List stock is still regarded as an attractive commitment for the conservative investor.*

WASHINGTON GAS LT. MAY BOOST PAYOUT

This natural gas distributor, serving Washington, D.C., and an extensive fast-growing surrounding area, is expected to vote a modest increase in its present $0.60 quarterly dividend, representing the fourth boost since 1957. Aided by an unusually cold weather, 1961 earnings are estimated at a new peak of $3.95 a share, compared with last year's $3.79. Revenues continue to show good growth, largely in the space-heating load. Saturation of the market is about 62%, which the management hopes to raise to 80%. To build up the summer load, the company is engaging in a vigorous promotion of gas air conditioners. Also, industrial accounts are being actively sought in the area served by Shenandoah Gas, acquired in November, 1959. *Selling recently at 69 (N.Y.S.E.) to yield 3.1%, this sound stock has appeal for income and moderate long-term appreciation.*

NEW PEAK NET LIKELY FOR DR. PEPPER

This moderate-sized soft drink producer appears to be headed for another new sales record this year, given satisfactory weather conditions. Having achieved virtually nationwide distribution in 1960, the company looks for volume to show an increase on the order of 10%. While sugar costs are up, margins should be well maintained on the larger volume, and earnings could approximate $1 a share, compared with $0.93 in 1960. Earnings in the seasonally poor first quarter benefited by good acceptance of hot Dr. Pepper. While the promotion covered only a limited number of locations, its success suggests that a substantial market is available for exploitation next fall and winter. Dividends of $0.15 quarterly are secure. *Selling recently at 22 (N.Y.S.E.), the stock is not on the bargain counter, but may be held as a long-term speculation on the company's expanding promotion efforts.*

Three of these women have vaginitis (trichomonal, monilial or mixed). Only comprehensive therapy can reach all three.

For every 2 cases of vaginitis caused by Trichomonas vaginalis alone, there is usually 1 case caused by Candida (Monilia) albicans, Haemophilus vaginalis, or mixed infection involving several pathogens.[1-3]

You can reach all of these vaginitis patients with the *comprehensive* vaginal preparation effective against C. albicans, H. vaginalis and other bacterial pathogens, *in addition to* T. vaginalis.

1. POWDER *for weekly application in your office:* FUROXONE® (furazolidone) 0.1% and MICOFUR® (nifuroxime) 0.5%, in an acidic water-dispersible base. 15 Gm. plastic squeeze bottle. 2. SUPPOSITORIES *for continued home use:* first week 1 in the morning and 1 on retiring. After first week, 1 at night may suffice. Continue treatment during menses and throughout menstrual cycle and for several days thereafter. Contain MICOFUR 0.375% and FUROXONE 0.25% in a water-miscible base. Boxes of 12 or 24 suppositories with applicator.

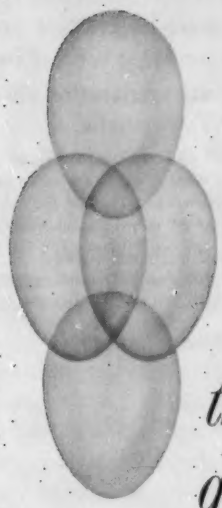
TRICOFURON®

Improved

1. Coolidge, C. W.; Glisson, C. S., Jr., and Smith, A. A.: J. M. A. Georgia 48:167 (Apr.) 1959. 2. Ensey, J. E.: Am. J. Obst. & Gynec. 77:155 (Jan.) 1959. 3. Frech, H. C., and Lanier, L. R., Jr.: J. M. A. Georgia 47:498 (Oct.) 1958.

EATON LABORATORIES
Division of The Norwich Pharmacal Company
NORWICH, NEW YORK





eggs...

their great value in infant and childhood nutrition

From the infant's first introduction to semisolid food and throughout the entire growth period, the exceptional nutrient value of eggs contributes significantly to body needs.

Egg yolk is often given as the first solid food; it is part of the earliest mixed diet and is a good source of iron for infants. The typical diet prescribed at one year of age includes an egg as an important daily constituent; adequate nutrition throughout the growing years calls for the nutrients found in eggs. Why?

The protein of eggs is unexcelled in quality. It is a standard against which other food proteins are measured. The essential fatty acids, the valuable vitamin and mineral provisions, and the great ease of digestibility of eggs qualify this food as one of the most universally applicable in the pediatric dietary. Yes, adults too, including calorie-watchers, benefit from the nutritional value of eggs.

One Egg Provides:*

Protein	6.5 Gm.
Carbohydrate	0.5 Gm.
Fats (total lipids)	6.0 Gm.
Fatty acids	
Saturated (total)	2.0 Gm.
Unsaturated	
Oleic acid	2.5 Gm.
Linoleic acid	0.5 Gm.

Vitamins present: A, D, E, K, B_1, B_2, B_6, B_{12}, pantothenic acid, niacin, folic acid, biotin.

Minerals present: Calcium, phosphorus, sodium, potassium, chlorine, sulfur, iron, iodine, manganese, magnesium, zinc, copper.

**U. S. Department of Agriculture Home and Garden Bulletin No. 72, Sept. 1960.*

The nutritional statements made in this advertisement have been reviewed by the Council on Foods and Nutrition of the American Medical Association and found consistent with current authoritative medical opinion.



Poultry and Egg National Board
8 South Michigan Avenue, Chicago 3, Ill.



Protects the angina patient better than vasodilators alone

Unless the coronary patient's ever-present anxiety about his condition can be controlled, it can easily induce an anginal attack or, in cases of myocardial infarction, can delay recovery.

This is why Miltrate gives better protection for the heart than vasodilators alone in coronary insufficiency, angina pectoris and postmyocardial infarction.

Miltrate contains PETN (pentaerythritol tetranitrate), acknowledged as basic therapy for long-acting vasodilation. . . .

What is more important—Miltrate provides Miltown, a tranquilizer which, unlike phenobarbital, relieves tension in the apprehensive angina patient without inducing daytime fogginess.

Thus, your patient's cardiac reserve is protected against his fear and concern about his condition; his operative arteries are dilated to enhance myocardial blood supply—and he can carry on normal activities more effectively since his mental acuity is unimpaired by barbiturates.

REFERENCES: 1. Ellis, L. B. *et al.:* Circulation *17*:945, May 1958. 2. Friedlander, H. S.: Am. J. Cardiol. *3*:395, Mar. 1958. 3. Riseman, J.E.F.: New England J. Med. *261*:1017, Nov. 12, 1959. 4. Russek, H. I. *et al.:* Circulation *13*:169, Aug. 1955. 5. Russek, H. I.: Am. J. Cardiol. *3*:547, April 1959. 6. Tortora, A. R.: Delaware M. J. *30*:290, Oct. 1958. 7. Waldman, S. and Pelner, L.: Am. Pract. & Digest Treat. *8*:1075, July 1957.

Supplied: Bottles of 50 tablets. Each tablet contains 200 mg. Miltown and 10 mg. pentaerythritol tetranitrate.

Dosage: 1 or 2 tablets q.i.d. *before meals* and at bedtime, according to individual requirements.

DWL-9419

Miltrate

Miltown® (meprobamate) + PETN

WALLACE LABORATORIES / *Cranbury, N. J.*



Vacation in the Woods

If you've made no plans for the summer as yet, you might consider a family camping trip. The fine camping equipment available today, makes it a pleasure to "rough it" for weeks on end.

If your summer vacation plans are still up in the air, you might give some thought to taking the family on a camping trip. Camping doesn't require a lot of time—you can easily work in a trip over a long weekend, if need be—and it can be most rewarding for the entire family.

Regardless of where you live, it is possible to find beautiful camping areas within easy driving distance. National or state parks and forests with camping facilities are located in every section of the country, and in many areas local and private campgrounds are becoming increasingly numerous.

Camping is easy on the pocketbook. A family can enjoy an inexpensive vacation and still range far afield, and at only a little more than it would cost to stay at home.

With the many new comforts and luxuries developed by equipment makers, camping is no longer considered primarily a masculine activity. Almost as many women as men go camping.

But probably one of the biggest bonuses of a camping vacation is that it seems to work a magic on family ties as they visit new places, share new experiences, and have fun together. A week or two in the healthful out-of-doors provides everyone, Mom and Dad included, with a full quota of relaxed and easy living.

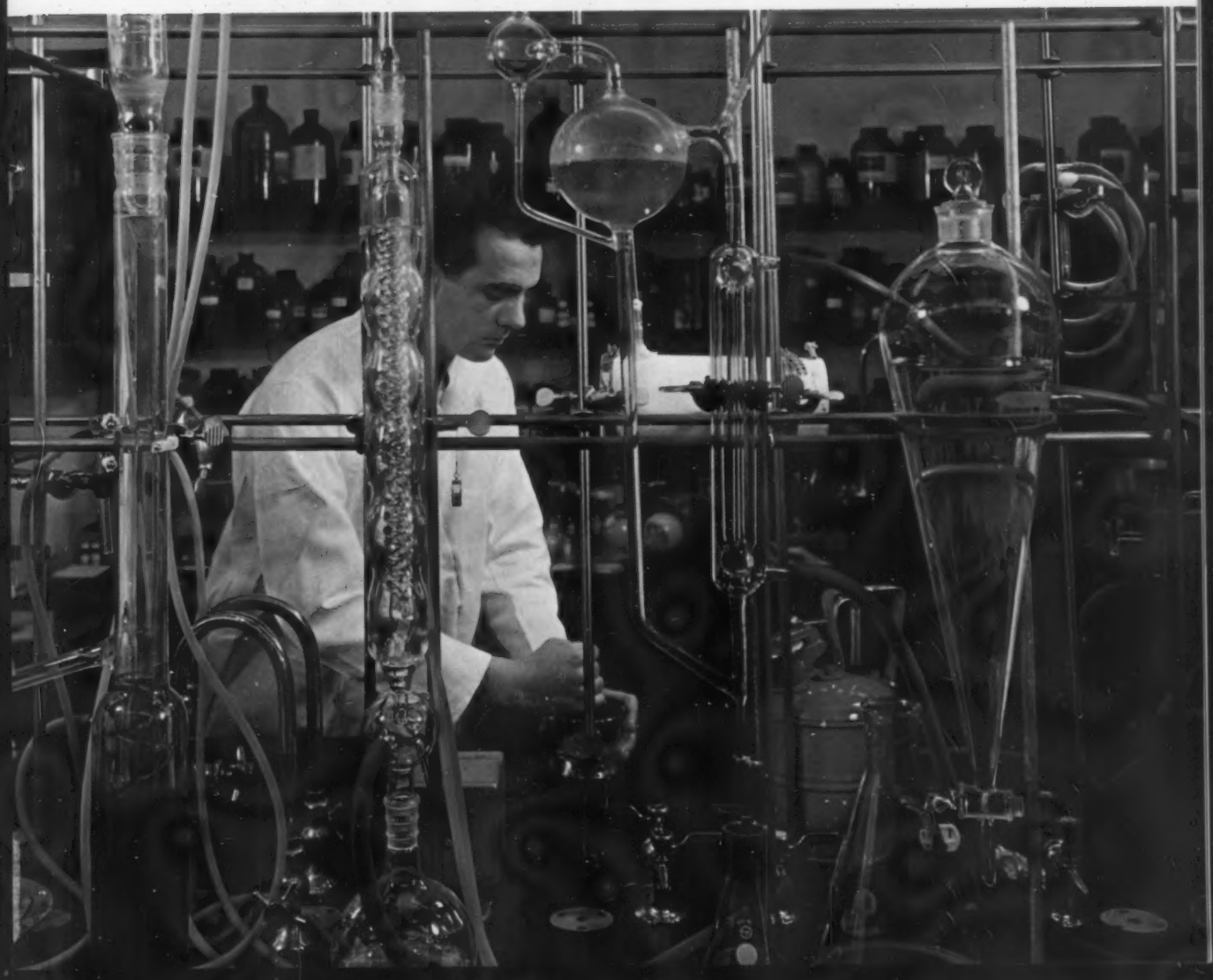
Sources of Information

Once it's decided that you'll take a camping vacation, the next thing to do is to find the spot. Your destination will determine what equipment and supplies you will want to take.

Many road maps indicate where camping facilities are located, and full listings may be obtained by writing the department of parks, conservation, or forestry in the capitals of the states you plan to visit. For information on national camping areas, write to National Parks, Department of Interior, or National Forests, Department of Agriculture, Forest Service, both in Washington, D. C.

If you're new to this business of living in a tent, you may want to purchase a book on camping. A number are available in book stores. They list camping facilities in the U. S. and Canada, locations, whom to write for information, and what charges, if any, you can expect at various campgrounds.

ANNOUNCING
A NEW FORMULATION
FOR PATIENTS WITH GASTRITIS
AND CERTAIN OTHER
GASTROINTESTINAL PROBLEMS
often *succeeds*
where other therapeutic modes fail



Controls pain and discomfort of gastritis and related disorders

. . . direct anesthetic action

For patients with tendency towards constipation

New OXAINE M, with topical anesthetic oxethazaine, stops pain of gastritis directly by prolonged desensitization of the irritated gastric mucosa.



Anesthetic, demulcent and antacid actions, encourage healing, relieve pain, bloating, belching, queasiness and nausea. OXAINE M contains magnesium hydroxide in the alumina gel vehicle to increase palatability and decrease constipation —elicits patient cooperation and permits long-term use when necessary. For patients with esophagitis, OXAINE, without magnesium hydroxide, is available.

Although not a "caine," oxethazaine is approximately 500 times as potent topically as cocaine. Its duration of action and effectiveness remain almost unaltered despite variation in pH or ebb and flow of gastric contents. Alumina gel forms a diffuse coating over mucosa and further prolongs the action of oxethazaine.

Wyeth ®
SERVICE TO MEDICINE

Wyeth Laboratories Philadelphia 1, Pa.

CLINICAL STUDIES CONFIRM EFFICACY, WIDE MARGIN OF SAFETY

Gastritis Symptoms Readily and Reliably Relieved

Complete relief of substernal or upper abdominal pain in 88 of 92 previously refractory patients with chronic gastritis[1] was obtained on *oxethazaine in alumina gel*, dietary controls, occasional gastric suction and rest. As therapy continued, dietary restrictions could be relaxed. No significant side effects developed even after 18 months' use.

In another study[2] of 56 patients with gastrointestinal disturbances—including 18 gastritis cases—53 patients displayed complete or partial relief when *oxethazaine in alumina gel* (*or alumina gel plus magnesium hydroxide*) was added to the therapeutic regimen.

Excellent Response Demonstrated in Other Gastrointestinal Disturbances

Oxethazaine in alumina gel is of value in a variety of other gastrointestinal conditions, including:

peptic ulcer[2,3] . . .	relieves pain and promotes healing of duodenal and gastric ulcers
esophagitis[4]	relieves postprandial heartburn and acid regurgitation in chronic esophagitis without stricture
irritable bowel[5] . . .	relieves discomfort and exaggerated gastrocolic reflex in the irritable bowel syndrome

References: 1. Deutsch, E., and Christian, H.J.: J. Am. Med. Assoc. *169*:2012 (April 25) 1959.
2. Moffitt, R.E.: Rhode Island Med. J. *44*:151 (March) 1961.
3. Hollander, E.: Am. J. Gastroenterol. *34*:613 (Dec.) 1960.
4. Jankelson, I.R., and Jankelson, O.M.: Am. J. Gastroenterol. *32*:636 (Nov.) 1959.
5. Jankelson, I.R., and Jankelson, O.M.: Am. J. Gastroenterol. *32*:719 (Dec.) 1959.

For further information on limitations, administration and prescribing of OXAINE M *and* OXAINE, *see descriptive literature or current Direction Circular.*

NEW *a palatable suspension*

OXAINE® M

Oxethazaine in Alumina Gel with Magnesium Hydroxide, Wyeth

In skeletal muscle spasm

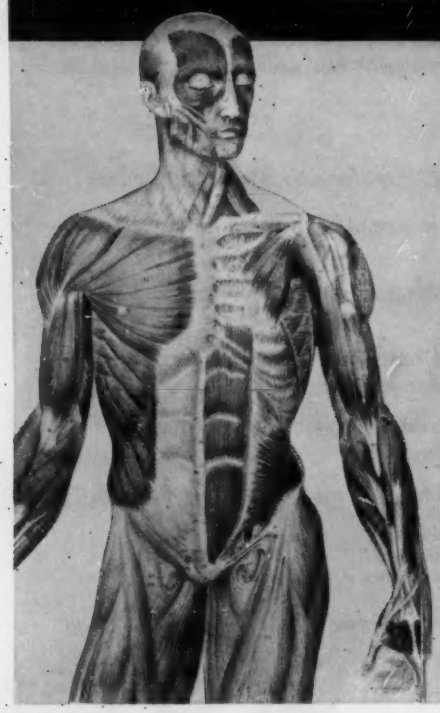
NORFLEX

orphenadrine citrate 100 mg. tablets

quickly resolves the spasm . . .

relieves the pain . . .

restores normal function



Prolonged relief

may last up to 12 hours after administration . . . permits uninterrupted sleep at night . . . does not interfere with daytime alertness . . . only the muscles in spasm respond . . . no lessening of general muscle tonus.

Contraindications:

Routine precautions against use of anticholinergic drugs should be observed. Norflex should be used with caution in glaucoma, tachycardia, or urinary retention.

Simple dosage



for all adults regardless of age or sex: 2 tablets daily—one in the morning, one in the evening—easily remembered . . . offers better patient cooperation.

NORFLEX is a product of

Riker Northridge, California

*U.S. Patent No. 2,567,351; other patents pending



Povan

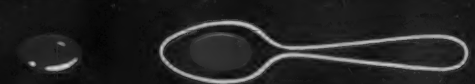
(pyrvinium pamoate, Parke-Davis)

SINGULARLY EFFECTIVE IN A SINGLE DOSE

POVAN provides a simplified and clinically proved means of bringing a common medical problem under control. Through its unusual ability to clear most cases of pinworm infection with just one dose, POVAN permits this problem to be dealt with in a practical manner... preferably on a family or institution-wide basis.

POVAN is well tolerated... readily accepted in both dosage forms... and not appreciably absorbed through the gastrointestinal tract. Its single-dose efficacy makes therapy not only convenient, but economical as well.

Supplied: POVAN is available in suspension or tablet form. The pleasant-tasting, strawberry-flavored suspension is supplied in 2-oz. bottles and the tablets in bottles of 25.



The suspension contains pyrvinium pamoate equivalent to 10 mg. pyrvinium base per cc. The sugar-coated tablets each contain pyrvinium pamoate equivalent to 50 mg. pyrvinium base. *Dosage:* Children and adults, a single oral dose equivalent to 5 mg. per Kg. of body weight. *Precautions:* Infrequent nausea and vomiting and intestinal complaints have been reported. Tablets should be swallowed whole to avoid staining teeth. Will color stools a bright red. Suspension will stain most materials.

PARKE-DAVIS

65161 PARKE, DAVIS & COMPANY, Detroit 32, Michigan



Today's tents are light, easy to put up, roomy and comfortable. The sewn-in floor and built-in screens are good protection against insects.

These books also list activities available at the various campsites. This allows you to choose camping grounds which will please most members of the average family. There are many areas in this country—many within your own state, for that matter—which are located within scenic surroundings and provide access to fishing, boating and swimming for those who desire something more active than soaking up fresh air and beautiful scenery.

With the improved camping equipment that's on the market today, you can head for the open road with just about all the comforts of home, and many campers do. But you needn't worry that outfitting the family will cost a small fortune. You can do the job adequately and comfortably for about $250 for a family of four.

Essential Equipment

Here's a quick list of the more essential articles needed for an extended camping trip: tent, sleeping bags, camp stove, portable icebox, lantern, flashlight, cooking equipment and eating utensils, food, water jug, ax, gasoline can, and first aid kit. While there is almost no end to the gadgets you can carry, it's best to keep equipment portable and simple, commensurate with comfort.

Of course, the most important single article on the list is the tent, since it will furnish you with protection against the weather and provide you with a comfortable home away from home. Serious consideration should be given to its purchase.

Buy one with enough head room for the tallest member of the family and with enough floor space to accommodate the entire group—an umbrella style tent 9 by 11 feet will comfortably sleep four persons. And don't overlook such additional desirable features as windows and a sewn-in floor for protection against moisture and insects.

Almost all tents sold today are made of cotton canvas, and you'll do well to buy this kind. It's a rugged, long-wearing fabric that has proven itself able to take rough campground treatment. But most important, its porous weave permits air to pass freely through the fabric. This eliminates the danger of moisture accumulating on the inside of the tent to drip down when you least expect it.

Canvas tents are made of a heavy construction called duck, or of lightweight drills and poplins which even women can erect in a matter of minutes. To further entice the ladies, unusual designs and new colors have replaced the drab khaki tent of yesteryear. Today's tents pop up with a flick of the wrist, attach to your car top, blossom over the end of a station wagon, or rise magically without the aid of tentpoles. In one type the poles are replaced with air-filled struts. Tent colors range from ocean blue to pink and yellow.

Drastic changes in equipment are not limited to tents, however. Makers of camping equipment have created multi-story sleeping bags, so the user can climb from layer to layer depending on the temperature; stoves and

Continued on page 156a

emko

EMKO VAGINAL FOAM* is entirely different from creams and jellies.

Larger volume per application assures total blockage of the cervical os and uniform coverage of the vaginal tract.

Foam **fills** the rugae where sperm can avoid contact with chemical agents in heavy creams or jellies.

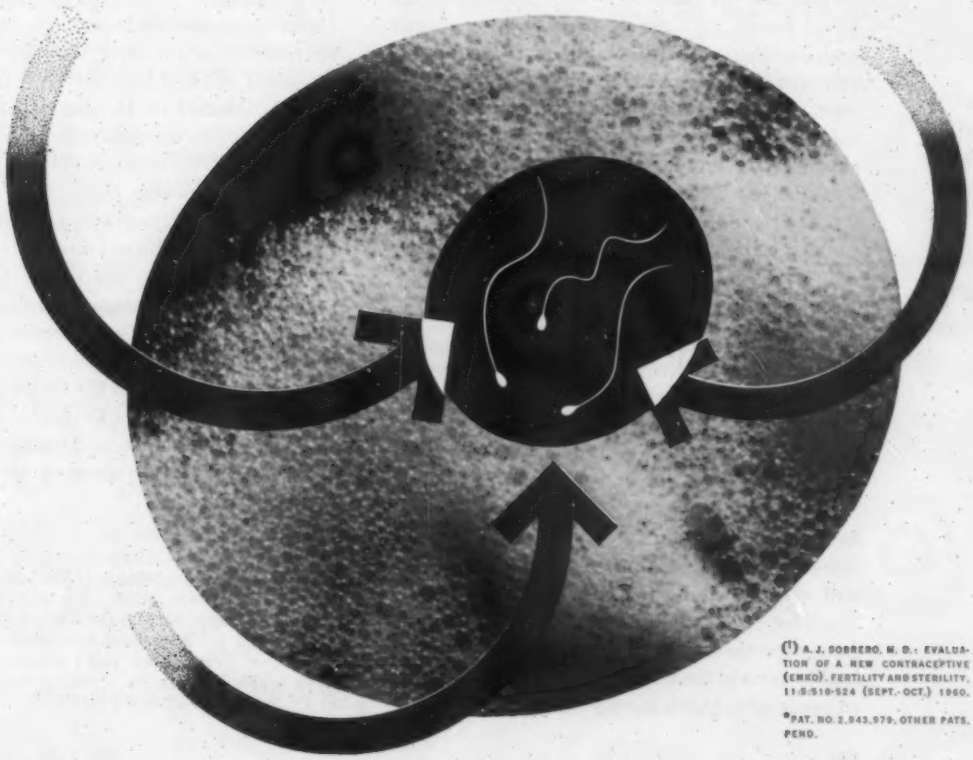
Uniform dispersion of the proven spermicides[1] (in the surface of each bubble)... means the sperm is exposed immediately and constantly to spermicidal action.

Equally important – Emko eliminates objectionable factors which create resistance to regular use of other methods:

- NO DIAPHRAGM
- NO LOSS OF SATISFACTION
- IT VANISHES AFTER USE—NO DOUCHING NEEDED
- NO GREASINESS OR "AFTER MESS"
- NO IRRITATION

a principle never before applied to birth control...

FOAM



(1) A. J. SOBRERO, M. D.: EVALUATION OF A NEW CONTRACEPTIVE (EMKO). FERTILITY AND STERILITY, 11:5:510-524 (SEPT.-OCT.) 1960.

*PAT. NO. 2,943,979, OTHER PATS. PEND.

At drug stores. Literature and samples available to doctors, write / The Emko Company • 7912 Manchester Ave. • St. Louis 17, Mo.

BECAUSE POOR DIABETIC CONTROL INCREASES THE THREAT OF VASCULAR COMPLICATIONS IN DIABETES[1, 2]...CONSIDER DIABINESE FIRST FOR ADEQUATE AND CONTINUOUS ORAL CONTROL

Oral therapy with DIABINESE can help assure more adequate blood-sugar control in many maturity-onset diabetics, including certain patients now poorly controlled by diet alone, some patients on insulin, and many who escape control on previous oral therapy.

Diabinese and diet

In patients with maturity-onset diabetes whose blood sugar remains elevated despite weight and/or caloric control, DIABINESE is frequently effective in doses of 100 to 250 mg. a day. Further, unlike insulin, DIABINESE has not been reported to increase appetite, and residual capacity for endogenous beta cell activity is stimulated. Thus, DIABINESE combined with dietary regulation will often ensure more satisfactory control than "diet alone."

Diabinese and the insulin patient

DIABINESE has proved to be an effective replacement for insulin among maturity-onset patients needing 40 units or less per day. This application of DIABINESE is especially valuable in patients who should not be exposed to the hazards and inconvenience of self-administered injection—those with poor eyesight, the infirm and elderly, and the emotionally disturbed. Transfer from insulin to DIABINESE in proper dosage lessens the risk of hypoglycemia, and may enable certain patients to resume occupations where insulin shock is considered dangerous.

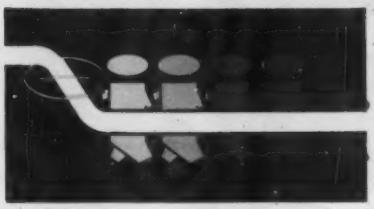
In selected patients in whom insulin requirements have become quite high, combined therapy with DIABINESE sometimes permits reduction of insulin dosage and helps to improve control.[3] Patients with insulin resistance may sometimes be similarly helped by replacement of part of the daily insulin dosage.[4]

Diabinese from the start

Continuous control in suitable candidates for sulfonylurea therapy is more likely to be achieved with DIABINESE. According to the A.M.A. Council on Drugs,[5] observations indicate that "on an equivalent dose and blood level basis, chlorpropamide has a somewhat greater therapeutic effect than has tolbutamide." This therapeutic superiority is reflected in the results of clinical observations like those of Fineberg,[6] who compared the effect of DIABINESE in 50 patients with the effect of tolbutamide in 35 patients. He concluded that "chlorpropamide produced satisfactory control of the diabetes in almost twice as great a percentage (76 versus 43 per cent) of patients than did tolbutamide, and excellent control in more than twice as great a percentage (74 versus 31 per cent)."

1. Johnsson, S.: Diabetes 9:1, 1960. 2. El Mahallawy, M. N., and Sabour, M. S.: J.A.M.A. 173:1783, 1960. 3. Editorial: Brit. M. J. 1:188, 1961. 4. Duncan, L. J. P., and Baird, J. D.: Pharmacol. Rev. 12:91, 1960. 5. A.M.A. Council on Drugs: New and Nonofficial Drugs, 1961, Philadelphia, Lippincott, 1961, p. 657. 6. Fineberg, S. K.: J. Am. Geriat. Soc. 8:441, 1960.

FOR MAXIMUM ASSURANCE OF CONTINUOUS BLOOD-SUGAR CONTROL



Diabinese®

BRAND OF CHLORPROPAMIDE

the oral antidiabetic most likely to succeed

economical once-a-day dosage

IN BRIEF

DIABINESE, a potent sulfonylurea, provides smooth, long-lasting control of blood sugar permitting economy and simplicity of low, once-a-day dosage. Moreover, DIABINESE often works where other agents have failed to give satisfactory control.

INDICATIONS: Uncomplicated diabetes mellitus of stable, mild or moderately severe nonketotic, maturity-onset type. Certain "brittle" patients may be helped to smoother control with reduced insulin requirements.

ADMINISTRATION AND DOSAGE: Familiarity with criteria for patient selection, continued close medical supervision, and observance by the patient of good dietary and hygienic habits are essential.

Like insulin, DIABINESE dosage must be regulated to individual patient requirements. Average maintenance dosage is 100-500 mg. daily. For most patients the recommended starting dose is 250 mg. given once daily. Geriatric patients should be started on 100-125 mg. daily. A priming dose is not necessary and should not be used; most patients should be maintained on 500 mg. or less daily. Maintenance dosage above 750 mg. should be avoided. Before initiating therapy, consult complete dosage information.

SIDE EFFECTS: In the main, side effects, e.g., hypoglycemia, gastrointestinal intolerance, and neurologic reactions, are related to dosage. They are not encountered frequently on presently recommended low dosage. There have been, however, occasional cases of jaundice and skin eruptions primarily due to drug sensitivity; other side effects which may be idiosyncratic are occasional diarrhea (sometimes sanguineous) and hematologic reactions. Since sensitivity reactions usually occur within the first six weeks of therapy, a time when the patient is under very close supervision, they may be readily detected. Should sensitivity reactions be detected, DIABINESE should be discontinued.

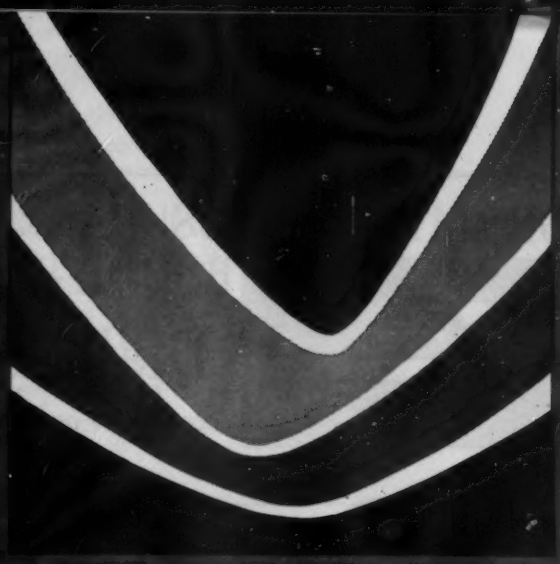
PRECAUTIONS AND CONTRAINDICATIONS: If hypoglycemia is encountered, the patient must be observed and treated continuously as necessary, usually 3-5 days, since DIABINESE is not significantly metabolized and is excreted slowly. DIABINESE as the sole agent is not indicated in juvenile diabetes mellitus and unstable or severely "brittle" diabetes mellitus of the adult type. Contraindicated in patients with hepatic dysfunction and in diabetes complicated by ketosis, acidosis, diabetic coma, fever, severe trauma, gangrene, Raynaud's disease, or severe impairment of renal or thyroid function. DIABINESE may prolong the activity of barbiturates. An effect like that of disulfiram has been noted when patients on DIABINESE drink alcoholic beverages.

SUPPLIED: As 100 mg. and 250 mg. scored chlorpropamide tablets.

More detailed professional information available on request.

Science for the world's well-being® Pfizer

PFIZER LABORATORIES
Division, Chas. Pfizer & Co., Inc. New York 17, New York



TRIMAGILL®*

POWDER—VAGINAL INSERTS

a new, rational, convenient therapy for

- Trichomonas vaginalis
- Candida albicans (Monilia)
- Hemophilus vaginalis
- Non-specific leukorrhea

WHAT IS TRIMAGILL?

Trimagill is presented as a powder for insufflation and as dry, non-greasy vaginal inserts containing Tartaric Acid, Citric Acid, Boric Acid, Dextrose, Potassium Bitartrate, Potassium Alum, and Adhesives.

TRIMAGILL IS LOGICAL!

Pathogenic micro-organisms that cause vaginal infections are incapable of surviving or propagating in a low pH environment. Trimagill produces and maintains a vaginal pH of 2.0 to 2.5—thus, infecting organisms are destroyed because an unfavorable environment is created.

TRIMAGILL IS EFFECTIVE!

Trimagill's low pH favors the growth of beneficial Döderlein bacilli and helps restore vaginal flora following infections. *Unlike antibiotics Trimagill does not foster monilia overgrowth. Resistant strains cannot develop.*

TRIMAGILL IS PRACTICAL AND CONVENIENT!

Trimagill Powder adheres to the vaginal mucosa for several hours *—eliminates need for vaginal and introital packs or external pads.* Trimagill Powder is easily applied during office visits; Trimagill Vaginal Inserts are recommended for patient use between office visits.

UNINTERRUPTED MEDICATION!

Trimagill treatment may safely be continued during menstruation thus preventing the normal physiological change from an acid to an alkaline pH.

TRIMAGILL IS SAFE!

No untoward reactions have been reported in over 3,000 cases treated to date. The combination of ingredients in Trimagill produces an unusually low pH *with emollient properties that prevent irritation of mucous membranes.*

TRIMAGILL IS PROVED BY CLINICAL EXPERIENCE!

Published papers† representing years of clinical experience in over 3,000 patients demonstrate the effectiveness and safety of Trimagill. Trimagill was used successfully in these cases primarily for acidification of the vaginal tract in treatment of vaginal infections. It was also used and is recommended as a non-absorbable agent following conization of the cervix to help eliminate postoperative sloughing, perineal odor, absorb secretion and maintain an acid pH.

TRIMAGILL IS SUPPLIED:

As *Powder:* 5 oz. Plastic Insufflator Bottles; *As Vaginal Inserts:* Boxes of 24. NOTE: Consult package circular for full details on instructions for use of both Powder and Vaginal Inserts.

WRITE FOR SAMPLES AND REPRINTS

*Patent Applied For.

†Reprints of published papers available on request.

THE S. E. MASSENGILL COMPANY

Bristol, Tennessee

Kansas City . San Francisco . New York

cooking utensils almost as fancy as those Mom uses at home; articles of comfort such as canvas air mattresses, air pillows, camping cots, portable canvas showers, and portable panels to insure privacy as well as protection from errant breezes.

In addition to creating new equipment, the canvas industry today is producing a far more durable fabric, one that will withstand years of rugged duty, while adding new comfort and color to the campground scene.

With so many new devices to take the chores out of camping, you'll find this kind of vacation hard to beat.

THE MAGIC ISLAND...

. . . is Tahiti, South Sea paradise
where the easygoing life is the norm.
Now you can fly there from Los Angeles in only 8 hours.

Fifteen years ago the inhabitants of Tahiti all became French citizens, but this change in official status made no difference to the carefree islanders. They continued to live as before, lazily, without schedules, without pressure. Of all Polynesian groups, it is said Tahiti has best withstood the time-clock onslaughts of the white man.

From the air, you can see that the island's 33-mile length actually consists of two ancient volcano cones joined by an isthmus and encircled by a fringe of lowland. The land area totals 402 square miles and supports a population that is estimated to be between 35,000 and 40,000. About half of the residents live in Papeete, the island's capital and only city.

The people cling to the coastline, where the sun and the sea meet. Inland is rugged and deserted, a region of crags, peaks and valleys covered with heavy tropical growth and usually cut off from the tropical sun by great banks of clouds.

In contrast to this natural ruggedness, Papeete, on the northwest coast is a full-blown city. Specialty shops offer a wide variety of pearl shell jewelry, carved wooden art objects, grass skirts, French perfume and Swiss watches, as well as other local handicrafts.

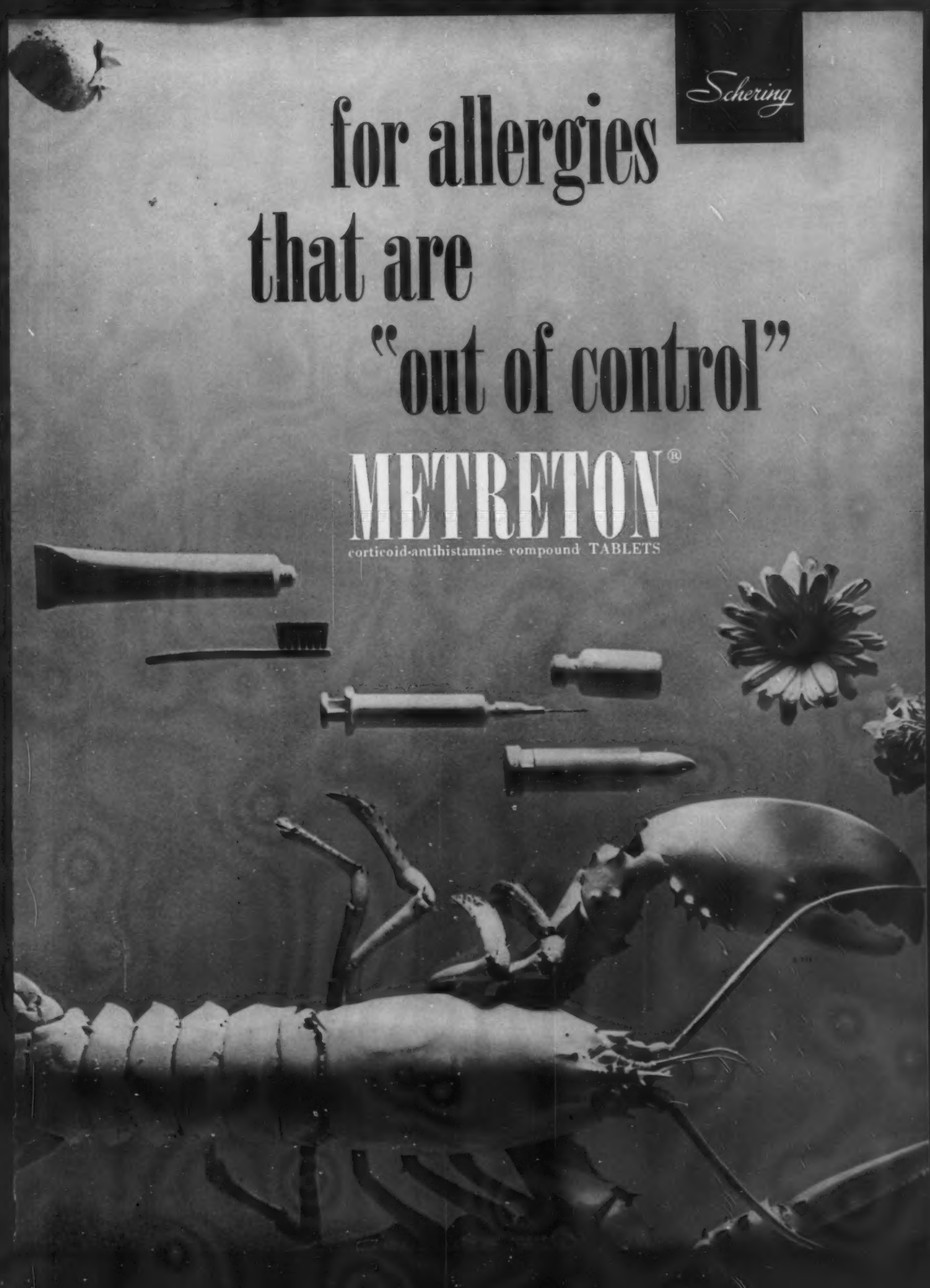
A specialty of the island is hand-printed cloth . . . for a do-it-yourself sarong known as a "pareu." With a few adroit twists of the handsome material, you can put yourself right in style and completely at ease.

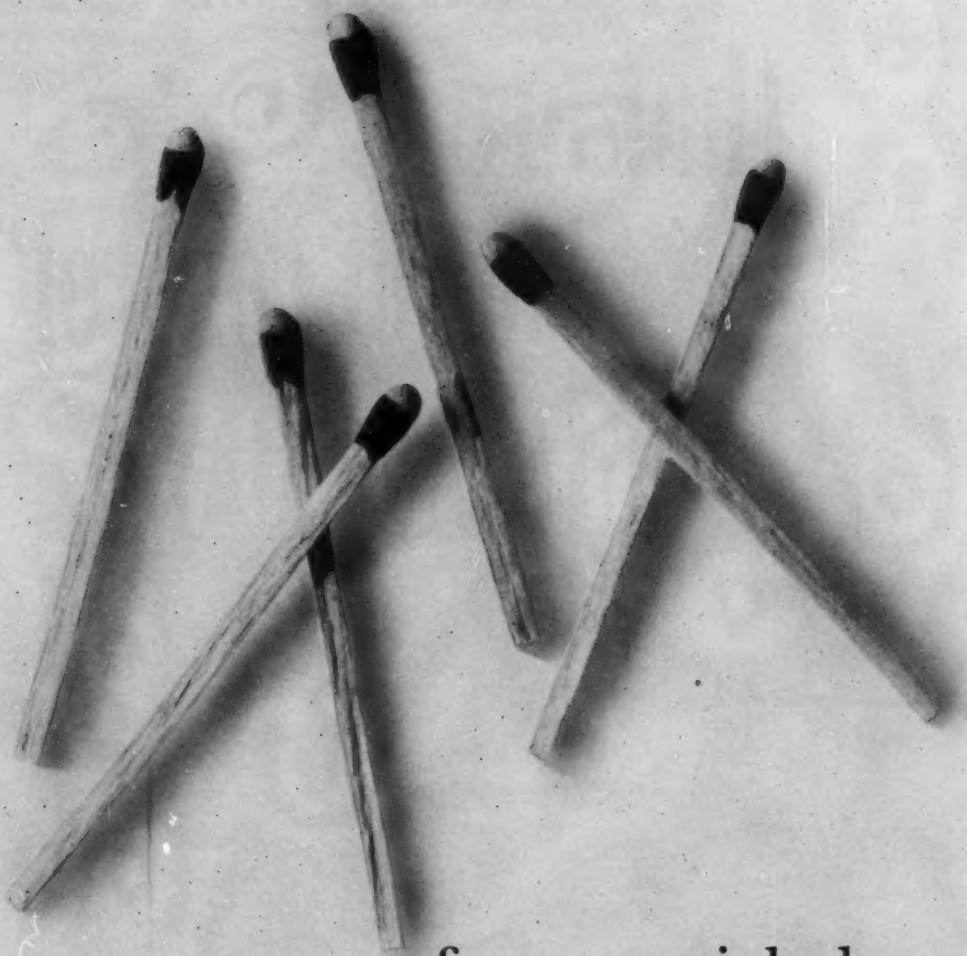
The temperature averages 79 degrees the year 'round, and cotton-clad "malihini" (newcomers) sometimes put aside their conventional sports clothes and sandals for the barefoot pleasure of grass skirts and halters or blouses, and leis.

It won't be long before you'll feel at home wearing the light native hats made of pandanus leaf, with shouting-loud colored bands of tropical flowers or seashells.

If you've dreamt of sun-drenched beaches, limpid surf, gently swaying palms and plunking ukelele music—it's Tahiti you had in mind. Living was never more relaxing, healthful, and invigorating.

The landscape is studded with fruit trees . . . breadfruit, banana and coconut . . . and while you're hardly expected to shinny up a tree trunk and do your own picking—the verdant growth does give an impression of richness and security. Oranges grow wild in the valley at Punaruu. When they're ready for harvesting, the valley is declared open . . . and hundreds of boys troop into that lush green bowl of undergrowth. Next morning, they file out laden


Schering
for allergies
that are
"out of control"
METRETON®
corticoid-antihistamine compound TABLETS

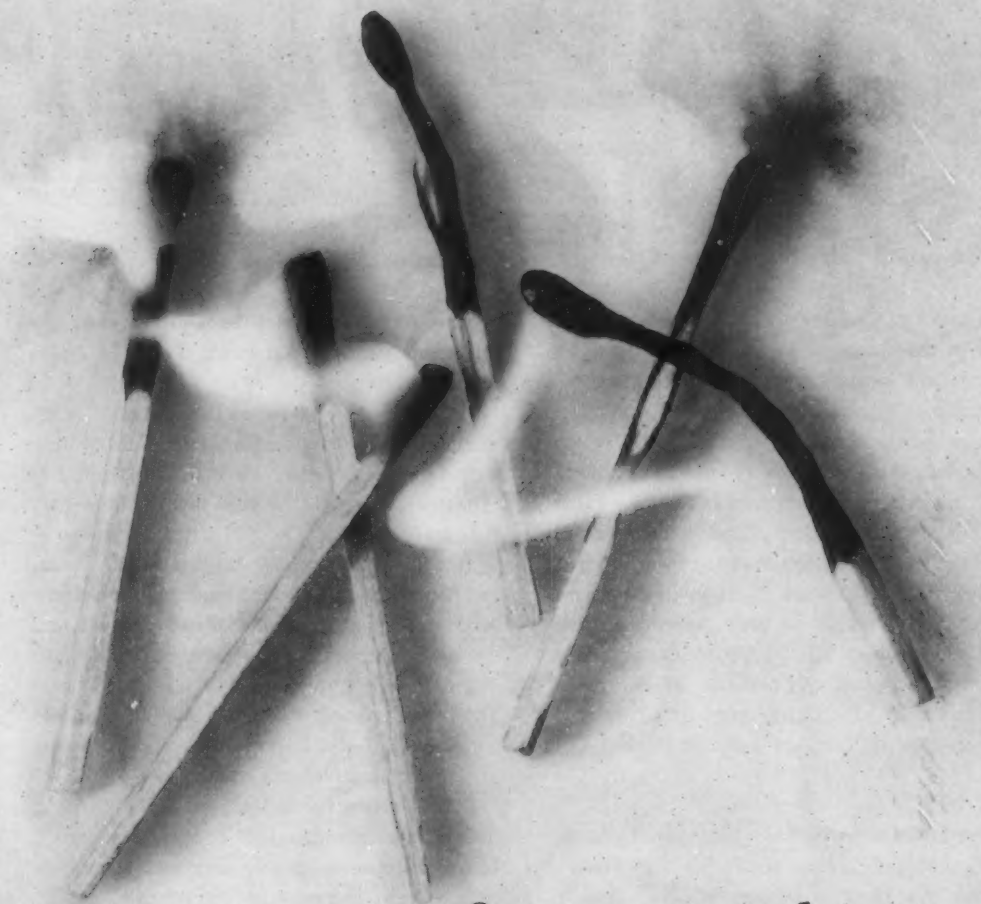


for potential ulcer...
to relieve tensions and to inhibit
hypermotility and hypersecretion

PATHIBAMATE®

PATHILON® tridihexethyl chloride Lederle with meprobamate

highly effective with minimal side effects for therapeutic/prophylactic treatment of duodenal ulcer, gastric ulcer, intestinal colic, spastic and irritable colon, ileitis, esophageal spasm, anxiety neurosis with gastrointestinal symptoms, gastric hypermotility. PATHIBAMATE-400 (full meprobamate effect)—1 tablet t.i.d. at mealtime, and 2 tablets at bedtime · PATHIBAMATE-200 (limited

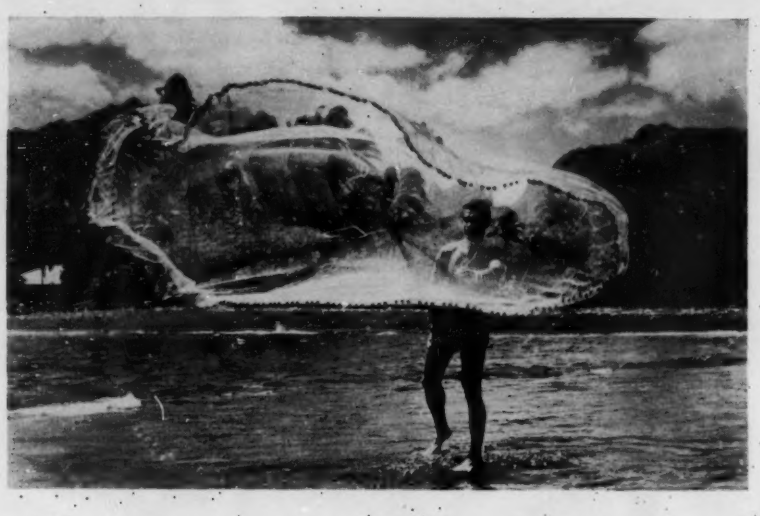


for patent ulcer...
to relieve tensions and to inhibit
hypermotility and hypersecretion

PATHIBAMATE®

meprobamate effect)—1 or 2 tablets t.i.d. at mealtime, and 2 tablets at bedtime · Adjust to patient response. CONTRAINDICATIONS: glaucoma; pyloric obstruction; obstruction of the urinary bladder neck. Request complete information on indications, dosage, precautions and contraindications from your Lederle representative or write to Medical Advisory Department.

Lederle LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York



The waters of Tahiti provide the islanders with an ample supply of fish and lobsters. Here a fisherman casts his net in quiet waters behind a coral reef.

with sacks of juice-heavy fruit, which will appear in the markets of Papeete.

Fish and lobsters wait off the coral reef to be scooped up and cooked.

Raw fish, marinated in lime juice which "cooks" it, is a specialty served at the Tahitian Tamaara . . . which compares to Hawaii's Luau or feast. Visitors to the island, long intrigued by the authentic settings imitated in a hundred movies, invariably want to be invited to such a party. As you sit on mats, bronze-skinned men and women will patter back and forth serving you cooked wild bananas, baked breadfruit and slices of suckling pig . . . all braised in deep pits, or outdoor Tahitian ovens.

New Airport

Blue-throated vini-vini (tiny wild parakeets) abound, lacing the trees with criss-crossing streaks of color.

Their only rivals in the air over Tahiti are T.A.I. (Transports Aériens Intercontinentaux) flights landing at Faaa Airport just outside Papeete. Last May the island's $3,000,000 modern airfield, opened last October, first welcomed T.A.I. DC-8 jetliners at this key point in French air routes around the world.

Faaa Airport makes direct flights possible between Honolulu and Tahiti . . . as well as non-stop DC-8 service from Los Angeles to the island paradise. The Los Angeles-Tahiti flight is part of T.A.I.'s trans-Pacific route which continues to Noumea and Australia, then on to Paris to connect with Air France Intercontinental jet flights to Los Angeles . . . completing a French around the world service. Air France is General Agent for T.A.I. in North America.

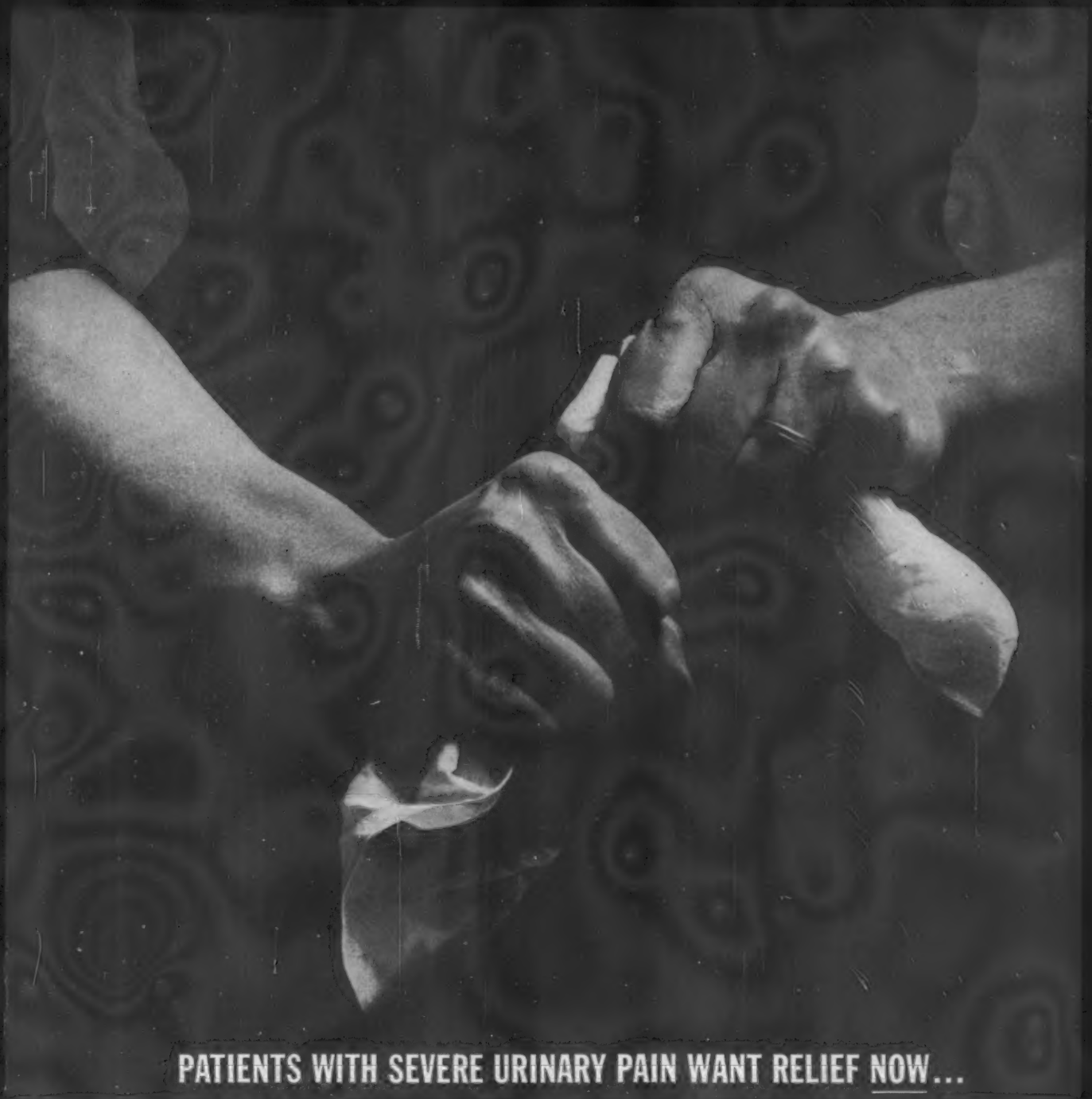
This May the jet runway extension was inaugurated at Faaa when T.A.I. introduced non-stop DC-8 jetliner service to Tahiti from Los Angeles . . . a 4,073-mile flight taking only 8 hours!

Bungalow hotels have been styled to retain the natural charm of the island. These accommodations make much use of native thatch and woods, but have all modern conveniences. Tiki Tapu Hotel, Lotus Village, and the Hotel Tahiti are among the loveliest. One of the tallest buildings in Papeete is the Grand Hotel . . . three stories plus a roof garden.

Even ten times that high, no building could shadow the grandeur of Tahiti's mountains. These are massive, nearly uncountable mounts poking fresh greenery at the warm-blue sky. One peak rises 7,339 feet. From its sides you can glory in still-life canvas views . . . white buildings with red roofs, yachts in the harbor, and Tahitian fishermen paddling across the lagoon in outrigger canoes.

It is the sort of thing the artist Gauguin must have seen in Tahiti when he wrote, "The landscape with its clear, warm colours dazzled me. Yet it was so simple to paint it as I saw it, without calculating this or that, a red, a blue!

"The gilded shapes reflected in the streams enchanted me. Why should I hesitate to pour all this gold—all this joyous sunlight—into my canvas?"



PATIENTS WITH SEVERE URINARY PAIN WANT RELIEF NOW...

Rx PYRIDIUM®

brand of phenylazo-diamino-pyridine HCl

Two Pyridium tablets t.i.d. relieve the pain of urinary infection in only 30 minutes. During the first 3 to 4 days of therapy, Pyridium, prescribed along with any antibacterial of your choice, will make your patient comfortable until the antibacterial reduces inflammation and controls the infection.

AVERAGE DOSE: Adults—2 tablets t.i.d. Children 9 to 12—1 tablet t.i.d. SUPPLIED: 0.1 Gm. tablets, bottles of 50. PRECAUTIONS: Pyridium is contraindicated in patients with renal insufficiency and/or severe hepatitis. *Full dosage information, available on request, should be consulted before initiating therapy.*

WARNER CHILCOTT

MORRIS PLAINS, N.J.

REGISTERED TRADEMARKS OF WARNER-CHILCOTT PRODUCTS FOR PROFESSIONAL USE



Calendar of Meetings

A listing of important national and international medical conferences

JULY

Paris, France. Latin Federation of Medical Electro-Radiological Societies, July 22-29. *Contact:* Dr. Charles Proux, 9, rue Daru, Paris 8e, France.

Paris, France. International Congress of Otolaryngology, July 23-28. *Contact:* Dr. H. Guillon, 6 av Mac-Mahon, Paris 17e, France.

Edinburgh, Scotland. International Psychoanalytical Congress, July 30-August 3. *Contact:* Cecily de Monchaux, 53 York Terrace, Regent's Park, London, N.W.1, England.

AUGUST

Stockholm, Sweden. International Pharmacological Meeting, Aug. 22-25. *Contact:* A. Wretlind, Karolinska Institutet, Stockholm 60, Sweden.

Vienna, Austria. International Congress on Mental Retardation, Aug. 14-19. *Contact:* Dr. K. Kundratitz, Universitats-Kinderklinik, Vienna, Austria.

Meran, Italy. International Congress of Practical Medicine, Aug. 21-Sept. 2. *Contact:* Bundesarztekammer, 1 Haedenkampstr., Cologne, Germany.

Jerusalem, Israel. World Assembly, Israel Medical Association, Aug. 14-25. *Contact:* Dr. Leo Schindet, 20, Metudela St., Jerusalem, Israel.

Honolulu, Hawaii. Pacific Science Association, Aug. 21-Sept. 6. *Contact:* Secretary-General, Tenth Pacific Science Congress, Bishop Museum, Honolulu 17.

Vienna, Austria. European Society of Hematology, Aug. 28-Sept. 2. *Contact:* Dr. H. Fleischhacker, Kongress-Sekretariat, Wien IX, Frankgasse 8, Billrothhaus, Austria.

Paris, France. International Congress of Group Psychotherapy, Aug. 27-29. *Contact:* Dr. Wellman Warner, P.O. Box 819, Grand Central Station, New York 17, N. Y.

Vienna, Austria. International Congress of Psychotherapy, Aug. 21-26. *Contact:* Dr. W. Spiel, Lazarettg. 14, Vienna 9, Austria.

SEPTEMBER

Dublin, Ireland. International Cardiovascular Society Congress, Sept. 7-9. *Contact:* Dr. H. Halmovici, 715 Park Ave., New York 21, N. Y.

Munich, Germany. International Congress of Neuropathology, Sept. 4-7. *Contact:* Dr. Webb Haymaker, Armed Forces Institute of Pathology, Walter Reed Army Medical Center, Washington 25, D. C.

Rome, Italy. International Congress on Rheumatology, Sept. 3-7. *Contact:* Prof. Camillo Benso Ballabio, Clinica Medica Generale, Via F., Sforza 35, Milan, Italy.

Augsburg, Germany. Postgraduate Congress of Practical Medicine, Sept. 22-24. *Contact:* Prof. Schretzenmayr, 19 Schaezlerstrasse, Augsburg, Germany.

Vienna, Austria. World Congress of Gynecology and Obstetrics, Sept. 3-9. *Contact:* Tassilo Antoine, c/o Universitat-Frauenklinik, I, Spitalgasse 23, Vienna 9, Austria.

São Paulo, Brazil. Inter-American Congress of Radiology, Sept. 3-10. *Contact:* Dr. Walter Bomfim-Pontes, Rua Cesario Motta, No. 112, São Paulo.

Rome, Italy. International Neurological Congress, Sept. 10-15. *Contact:* Giovanni Alema, Secretary General of the 7th International Neurological Congress, Viale Universita, 30, Rome.

Rome, Italy. International League Against Epilepsy, Sept. 10. *Contact:* Dr. R. Vizioli, Viale dell Universita, 30, Rome.

Toronto, Canada. International Tuberculosis Conference, Sept. 10-14. *Contact:* Dr. C. W. L. Jeanes, 265 Elgin St., Ottawa 4, Canada.

Rio de Janeiro, Brazil. World Medical Association, Sept. 15-20. *Contact:* Dr. Heinz Lord, 10 Columbus Circle, New York 19, N. Y.

OCTOBER

New York, N. Y. International Congress of Allergology, Oct. 15-20. *Contact:* Dr. William B. Sherman, 60 East 58th St., New York 22, N. Y.

Geneva, Switzerland. International Congress on Therapeutics, October 6-8. *Contact:* Dr. P. Rentchnick, Case Postale 229, Geneva, Switzerland.

Lago Maggiore, Italy. Italian Society of Gastroenterology, Oct. 2-3. *Contact:* Prof. A. Gasbarrini, Via Murri 3, Bologna, Italy.

NOVEMBER

San Francisco, Cal. International College of Surgeons, Western Regional Meeting, Nov. 19-22. *Contact:* Dr. Walter F. James, 1516 Lake Shore Dr., Chicago 10.

DECEMBER

Nassau, Bahamas. Bahamas Surgical Conference, Dec. 27-Jan. 6. *Contact:* Mr. Irvin M. Wechsler, P.O. Box 1454, Nassau, Bahamas.



When the rhythm is wrong...PRONESTYL® HYDROCHLORIDE

When there's a pram in her future,

Soon she'll feel the first vague stirrings of new life. And, now, a glass of warm milk does seem to help. It reassures somehow. ▪ But there's much more to it than soothing psychology, isn't there? For it *is* a time for stepped-up calcium intake. Not to mention iron, and the other nutrients she'll draw on. ▪ And this is when Pramilets are in order. Filmtab Pramilets give little mother a significant dosage of phosphorus-free calcium. And, to its already comprehensive formula, Pramilets now adds *more* iron (easily-tolerated ferrous fumarate) . . . *more* Vitamin C . . . *more* Vitamin B_6. ▪ New, improved formula and all, the Pramilets Filmtab is as easy to swallow as ever. The size hasn't changed. Only the potency.

she'll need Filmtab® Pramilets®...

Comprehensive vitamin-mineral support with just 1 Filmtab daily

Each Pramilets Filmtab represents:

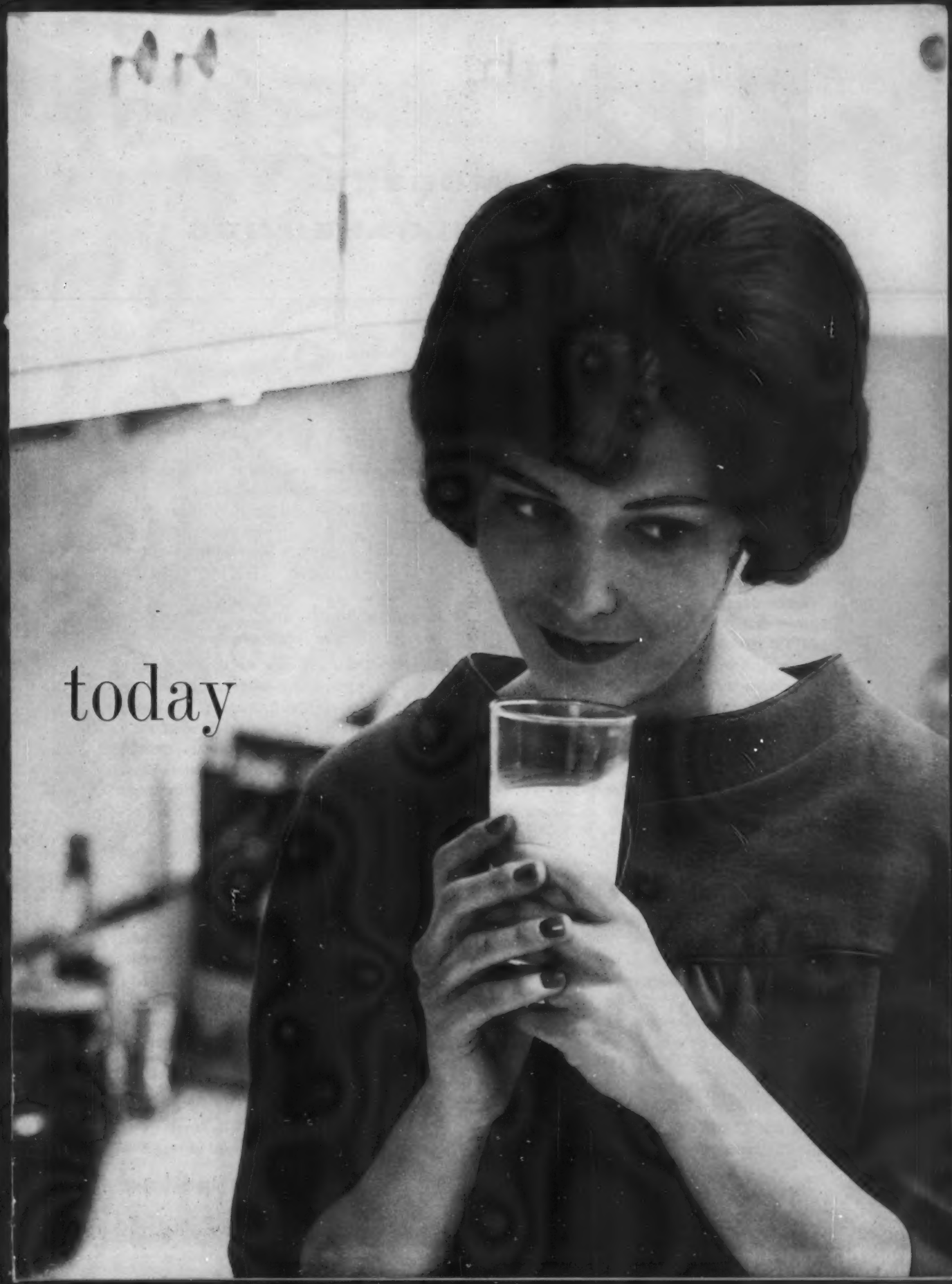
Vitamin A (4000 units)	1.2 mg. (1 MDR*)
Vitamin D (400 units)	10 mcg. (1 MDR)
Thiamine Mononitrate	3 mg. (3 MDR)
Riboflavin	2 mg. (1⅔ MDR)
Nicotinamide	10 mg. (1 MDR)
Ascorbic Acid (C)	60 mg. (2 MDR)
Pyridoxine Hydrochloride	3 mg.†
Cobalamin (Vit. B_{12})	3 mcg.
Calcium Pantothenate	1 mg.††
Calcium Carbonate, U.S.P.	625 mg.
[Calcium	250 mg. (⅕ MDR)]
Ferrous Fumarate	120 mg.
[Iron	40 mg. (2⅔ MDR)]
Magnesium (as oxide)	0.15 mg.
Zinc (as oxide)	0.085 mg.††
Molybdenum (as ammonium molybdate)	0.2 mg.††
Iodine (as calcium iodate)	0.1 mg. (1 MDR)
Copper (as chloride)	0.15 mg.

®FILMTAB—FILM-SEALED TABLETS, ABBOTT.

*MDR—Minimum Daily Requirement for Pregnancy.
†Recommended Daily Requirement Not Established.
††Supplemental Need in Human Nutrition Not Established.

ALSO NOW AVAILABLE: PRAMILETS-F (Rx ONLY) WITH FOLIC ACID

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MODERN THERAPEUTICS

New therapies and significant clinical investigations abstracted from other journals.

Exsufflation Belt

Treatment with an intermittent positive-pressure breathing (IPPB) apparatus combined with an abdominal belt was favorably received by most patients who have used it. There appears to be little, if any, increase in objective measurements of improvement in this group over that normally obtained with use of the IPPB device alone. The applicability of this apparatus would thus need to be appraised on an individual basis, with particular reference to the degree of subjective improvement of the patient's condition.

WILLIAM FRAIMOW, M.D.,
JOSEPH J. MANN, M.D.,
HAVILAND FLICKINGER, M.D. AND
RICHARD T. CATHEART, M.D.
J.A.M.A. (1960), Vol. 173, No. 10, Pp. 1098-1101

Transfer of Staphylococcus Pyogenes

An experiment is described which demonstrates the spread of staphylococci from two artificially infected beds in a small ward.

A simple bed-making routine results in considerable dissemination from both wool and cotton fabrics. Spread to other beds appears to occur both by direct contact and by aerial route.

The number of viable organisms recovered from the infected bedding fell by 90% after the first 72 hours.

The significance of these results and those of other workers in relation to the problem of hospital cross-infection is discussed.

KEVIN ANDERSON, M.D., JOHN COULTER, M.D.,
AND ENE LOOKE, B.SC.
The Brit. Med. J. (1960), No. 5190, Pp. 1925-1927

Inapparent Measles after Gamma Globulin Administration

Nineteen of thirty-eight susceptible children who were exposed to measles and given gamma globulin developed measles antibodies without overt signs of disease. Five of these nineteen children failed to contact measles when exposed again seven months later. Titers of antibodies acquired as a result of inapparent infection were generally lower than titers resulting from overt disease when serums were tested about seven weeks after infection. Epidemiologic evidence indicates that the inapparent infections were less contagious than unmodified cases. In order to avoid the needless readministration of gamma globulin on subsequent exposure, it is suggested that the complement fixation (CF) test might be used to determine the immune status of children exposed to measles who were initially considered susceptible yet remain asymptomatic after receiving a dose of gamma globulin.

FRANCIS L. BLACK, PH.D. AND
HERMAN YANNET, M.D.
J.A.M.A. (1960) Vol. 173, No. 11, Pp. 1183-1188

Continued on page 170a



Athlete's foot is caused by fungi invading the horny, keratinized layers of the skin not reached by the normal blood supply. Topical application of DESENEX, a combination of zinc undecylenate and undecylenic acid, brings these powerful antifungal agents into direct contact with troublesome fungi and quickly relieves—**and arrests**—the annoying condition.

Hundreds of thousands of athlete's foot infections have been arrested by topical treatment with DESENEX, among the best tolerated of all potent fungicidal agents.

And DESENEX is inexpensive—only pennies per treatment: DESENEX Ointment can be applied liberally to both feet every night for a week and a half from only a single tube. Itching and discomfort are stopped almost immediately. DESENEX is also recommended for treatment of other susceptible fungus infections of the skin and nails.

Dosage: At night, supply Ointment liberally to infected and surrounding areas. In the morning, rub or shake powder into the shoes and feet.

Supplied: Ointment—1 oz. tubes and 1 lb. jars. Powder—1½ oz. and 1 lb. containers. Solution (Undecylenic acid)—2 fl. oz. and 1 qt. bottles. Aerosol Spray—6 oz. cans.

Maltbie Laboratories Division,
Wallace & Tiernan Inc., Belleville 9, N. J.



Desenex®
ointment • spray
powder • solution

Available in Canada through Elliott-Marion Company, Ltd., Montreal. PD-11



about that biliary dyspepsia...

Give Supligol to increase the volume and flow of low viscosity bile through the biliary tree. The choleretic and hydrocholeretic action of the whole bile plus ketocholanic acids in Supligol effectively overcomes biliary stasis and aids fat digestion.

The result is a rapid return to normal biliary function and relief of constipation, flatulence and abdominal discomfort.

Contraindication: Complete biliary obstruction.

Supligol® tablets

Whole bile plus ketocholanic acids

American Ferment Division, Breon Laboratories Inc., New York 18, N. Y.

"wearability"



NO TASTE FATIGUE
EXCELLENT RESULTS
NO CONSTIPATION

the most widely prescribed and most wearable of all antacids

suspension tablets

Tablet Maalox No. 1 equivalent to 1 teaspoon Suspension
Tablet Maalox No. 2 equivalent to 2 teaspoons Suspension

Coming next month . . .

- *Professional Liability: A New Problem in Medicine*
  By Joseph F. Sadusk, Jr., M.D., Oakland, California.

- *Hospital Liability for Medical Malpractice*
  By Carl E. Wasmuth, M.D., Department of Anesthesiology, Cleveland Clinic Foundation and The Frank E. Bunts Institute, Cleveland, Ohio.

- *Pediatric Anesthesia Today*
  By Barbara Lipton, M.D., Anesthesia Service, Beth Israel Hospital, New York, New York.

- *Oxytocin in Obstetrics*
  By Harry Fields, M.D., Assistant Professor; John W. Greene, Jr., M.D., Assistant Professor; Department of Obstetrics and Gynecology, University of Pennsylvania School of Medicine, Philadelphia, Penna., and Dr. Keith DeVoe, Jr., M.D.

- *A Blueprint for Psychosomatic Practice*
  By Sanford M. Lewis, M.D., Physician-in-Chief, Psychosomatic Clinic, United Hospitals of Newark and Consultant in Psychosomatic Illnesses, New Jersey State Hospital at Marlboro, Newark, New Jersey.

- *When Should My Cardiac Patient Return to Work?*
  By C. Anthony D'Alonzo, M.D., Assistant Medical Director, E. I. duPont deNemours and Company, Wilmington, Delaware.

- *Recent Progress in Mental Retardation*
  By Joseph J. Reidy, Assistant Commissioner in Department of Mental Hygiene, State of Maryland, Baltimore, Maryland.

- *A Rudimentary Approach to Ego Strengthening*
  By Edwin F. Alston, M.D., Anne E. Wilder, M.D., and Samuel Hoch, M.D., San Francisco, California.

Pulmonary Arteriosclerosis in Transposition of the Great Vessels

Cross sections of 1,561 pulmonary arterial vessels in eight size ranges from patients dying with transposition of the great vessels were measured and compared with 2,169 vessels from normal lungs. Patients were grouped into six age ranges between birth and 34 months. Patients with transposition retain the newborn structure of pulmonary arteries for about three months, while normal infants show a rapid thinning-out of arterial walls during this period. After three months, the transposition group develops further thickening of the arteries, while the opposite trend continues in normals. When there is pulmonic stenosis, in addition to transposition, the pulmonary arteries are normal or thinner-walled than normal.

DONALD J. FERGUSON, M.D., PAUL ADAMS, M.D. AND DAVID WATSON, M.D.

J. of Dis. of Child. (1960), Vol. 99, No. 5, Pp. 121-129

Arterial Oxygen Unsaturation and the Ventilation-Perfusion Defect of Laennec's Cirrhosis

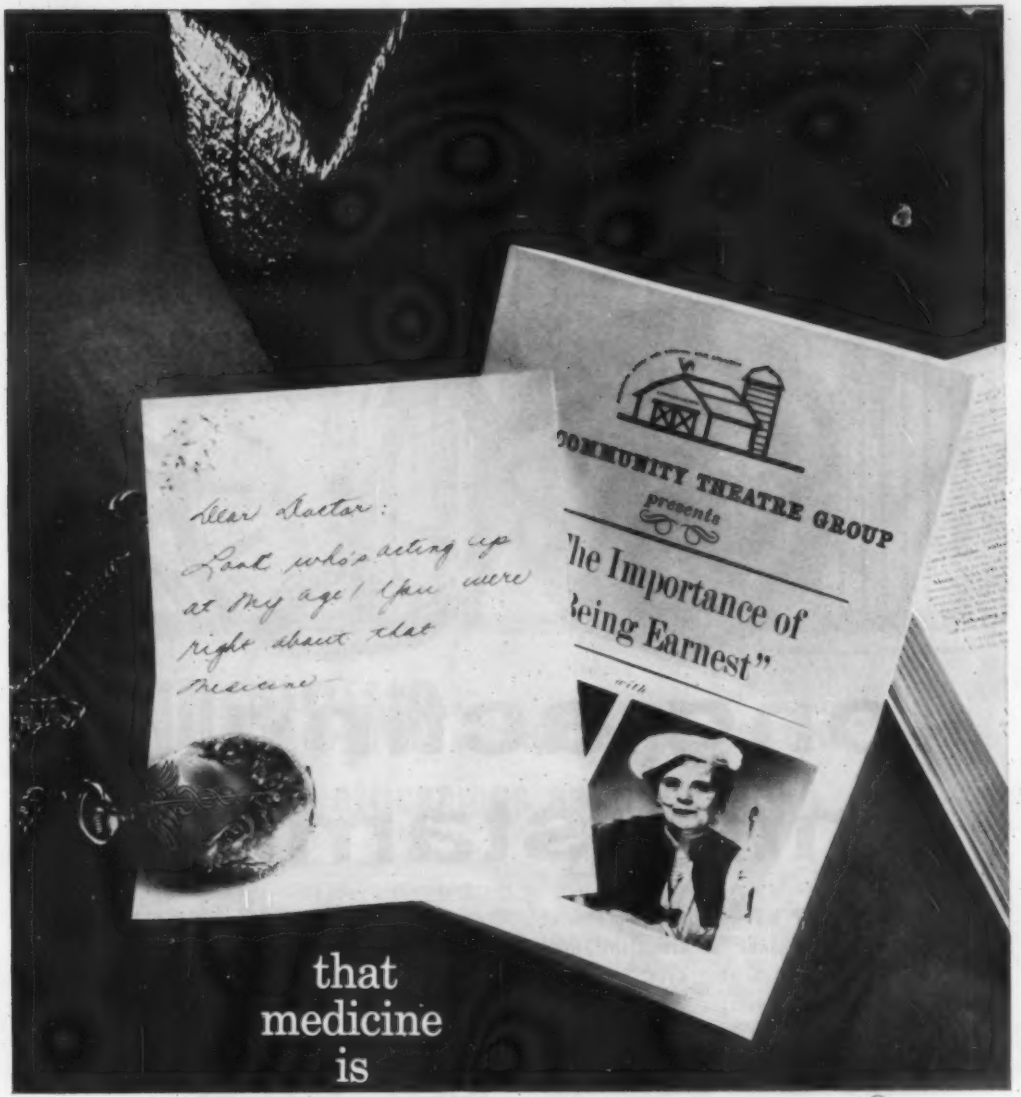
Studies of pulmonary function, arterial oxygen saturation and ventilation-perfusion relations were performed in fifty-six patients with far advanced Laennec's cirrhosis and one patient with extrahepatic portal-vein thrombosis. A tendency to arterial oxygen unsaturation and increased venous admixture was demonstrated.

Abnormal functioning communications may exist between the portal and pulmonary venous systems through the paraesophageal, mediastinal, azygous and bronchial venous systems in patients with portal hypertension. Except in rare cases, the arterial oxygen unsaturation is slight and probably of little clinical significance.

THEODORE RODMAN, M.D., MELVIN SOBEL, M.D. AND P. CLOSE, M.D.

The New Eng. J. of Med. (1960) Vol. 263, No. 2, Pp. 73-77

Continued on page 175a



GEVRESTIN®

Geriatric Vitamins—Minerals—Hormones—d-Amphetamine Lederle

one capsule every morning supplements the diet to help achieve proper balance: ❖ nutritionally ❖ metabolically ❖ mentally

Each dry-filled capsule contains: Ethinyl Estradiol, 0.01 mg. • Methyl Testosterone, 2.5 mg. • d-Amphetamine Sulfate, 2.5 mg. • Vitamin A (Acetate), 5,000 U.S.P. Units • Vitamin D, 500 U.S.P. Units • Vitamin B_{12} with AUTRINIC® Intrinsic Factor Concentrate, 1/15 N.F. Oral Unit • Thiamine Mononitrate (B_1), 5 mg. • Riboflavin (B_2), 5 mg. • Niacinamide, 15 mg. • Pyridoxine HCl (B_6), 0.5 mg. • Calcium Pantothenate, 5 mg. • Choline Bitartrate, 25 mg. • Inositol, 25 mg. • Ascorbic Acid (C) as Calcium Ascorbate, 50 mg. • l-Lysine Monohydrochloride, 25 mg. • Vitamin E (Tocopheryl Acid Succinate), 10 Int. Units • Rutin, 12.5 mg. • Ferrous Fumarate (Elemental iron, 10 mg.), 30.4 mg. • Iodine (as KI), 0.1 mg. • Calcium (as $CaHPO_4$), 35 mg. • Phosphorus (as $CaHPO_4$), 27 mg. • Fluorine (as CaF_2), 0.1 mg. • Copper (as CuO), 1 mg. • Potassium (as K_2SO_4), 5 mg. • Manganese (as MnO_2), 1 mg. • Zinc (as ZnO), 0.5 mg. • Magnesium (MgO), 1 mg. *Supply:* Bottles of 100 and 1,000.

REQUEST COMPLETE INFORMATION ON INDICATIONS, DOSAGE, PRECAUTIONS AND CONTRAINDICATIONS FROM YOUR LEDERLE REPRESENTATIVE OR WRITE TO MEDICAL ADVISORY DEPARTMENT.

LEDERLE LABORATORIES, A Division of AMERICAN CYANAMID COMPANY, Pearl River, New York

'PERAZIL'®



long-acting antihistamine

USES: 'Perazil' relieves the symptoms of sneezing, "incessant" itching, inflamed eyes, rhinorrhea, itching eyes, nose and throat, associated with:
Hay Fever • *Pollenosis* • *Pruritus* • *Urticaria* • *Vasomotor Rhinitis* • *Allergic Dermatitis* • *Drug Sensitivity*

ADVANTAGES: 'Perazil' is both prompt and prolonged in effect, providing symptomatic relief lasting 12 to 24 hours from a single dose.

PRECAUTION: When drowsiness does occur it is generally mild and the usual precautions should be observed. No toxic effects related to either the blood-forming organs or the cardiovascular system are produced.

DOSAGE: Adults and children over 8 years, 50 mg. once or twice daily as required. The dose may be increased in severe cases.

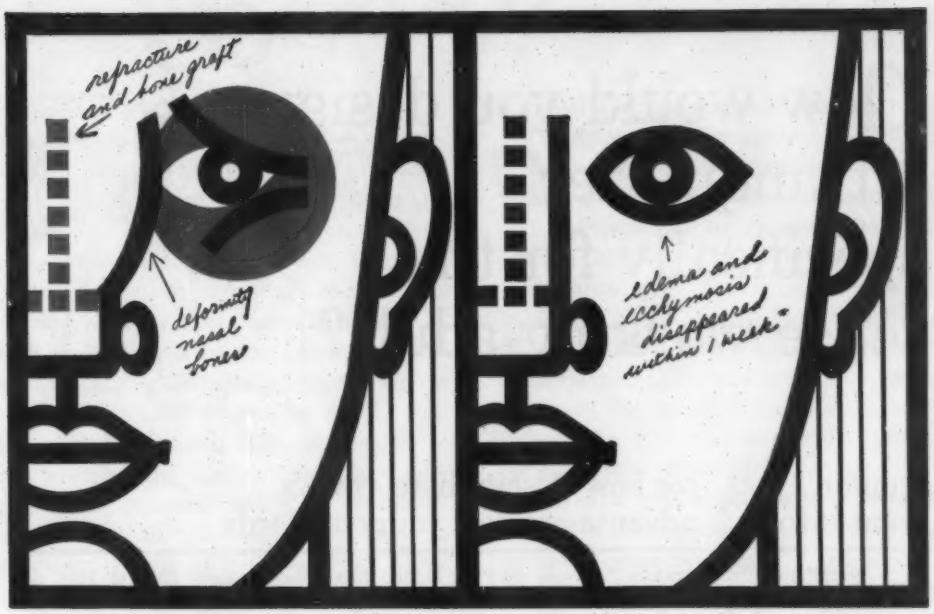
Children from 2 to 8 years, 25 mg. (one sugar-coated tablet) once daily.

Infants up to 2 years, 12½ mg. (one quarter of a 50 mg. tablet) crushed and mixed with a spoonful of jam or syrup.

SUPPLIED: Tablets of 25 mg., sugar-coated, bottles of 100 and 1000; 50 mg., scored, bottles of 100 and 1000.

'PERAZIL'® brand Chlorcyclizine Hydrochloride

BURROUGHS WELLCOME & CO. (U. S. A.) INC., Tuckahoe, New York



*Case Reports on File, Wampole Laboratories

ANNOUNCING: the first oral enzyme preparation as efficacious as an injection

Chymotrypsin is the only orally administered proteolytic enzyme likely to reach the site of inflammation in active form. In contrast to trypsin, which is rapidly inactivated, chymotrypsin remains relatively stable in human intestinal juice.[1,2] **Evidence of systemic absorption** — Experimental: Radioactive studies show blood levels after one 20 mg. AVAZYME tablet comparable to those of intramuscular injection of 5 mg. chymotrypsin.[1,3] Clinical: Oral AVAZYME therapy reversed the inflammatory process in chronic and acute conditions; prevented severe postoperative edema and ecchymosis.[4,5] **Well tolerated and practical** — Eliminates painful or necrotizing injections, and reduces the risk of allergic or anaphylactoid reactions.

INDICATED in trauma, pre- and post-surgery, thrombophlebitis, ophthalmology, obstetrics and gynecology, urology, respiratory conditions, otolaryngology, oral and dental pre- and post-surgery. **Dosage:** In severe cases, two tablets four times daily followed by a maintenance dosage of one tablet four times daily. In mild cases, one tablet four times daily is sufficient. In the presence of infections, appropriate antibiotic therapy should be used concurrently. AVAZYME is compatible with all commonly used drugs. **Available** as crystalline chymotrypsin (AVAZYME) in yellow enteric coated tablets equivalent in proteolytic activity to 50,000 Wampole Units (approximately 20 mg.), bottles of 48. **NOTE:** In the event that AVAZYME tablets are not readily obtainable, the pharmacist can be assured of supplies by calling his wholesaler. AVAZYME is carried by all major wholesalers.

REFERENCES: 1. Avakian, S.: New England J. Med. 264:764, 1961. 2. Wohlman, A., Kabacoff, B. L., and Avakian, S.: to be published. 3. Bogner, R. L.: to be published. 4. Coleman, J. M., et al.: Intestinal Absorption of Crystalline Chymotrypsin, Exhibit presented at the Scientific Session of the American Academy of General Practice, Miami Beach, Florida, April 17, 1961. 5. Monninger, R. H. G.: scheduled for publication in Clinical Medicine, 1961.

NEW

Avazyme®

an oil crystalline chymotrypsin tablet

An orally administered enzyme with proven absorption.
A research development of Wampole Laboratories.

WAMPOLE LABORATORIES

Stamford, Connecticut

how would you design a tranquilizer specifically for the tense working adult?



wouldn't you want it to be: — **see how closely these ATARAX advantages meet your standards**

versatile and remarkably well tolerated

ATARAX "... was used in higher-than-usual dosages (200 to 1600 mg. daily).... Because of its clinical efficacy and lack of toxicity, [ATARAX] is useful to both the psychiatrist and the general practitioner...."[2]

efficacious

"... hydroxyzine [ATARAX] is of considerable therapeutic value in the treatment of psychoneurosis...." Most patients "... with commonly encountered neuroses such as anxiety states occurring in business executives, in laborers dissatisfied with their jobs, in patients experiencing emotional upheavals caused by disturbed family situations, and in those with associated organic disease..." were treated successfully.[1]

calming, seldom impairing mental acuity

Working adults "... seldom experience drowsiness or impairment of intellectual function with therapeutic doses."[3]

Nor is that all that ATARAX has to offer. In one of the most crippling manifestations of anxiety—alcoholism—ATARAX controls both acute and chronic stages without risk of injury to already damaged livers.[4] In fact, though outstandingly useful in working adults, ATARAX equally well meets the needs of disturbed pediatric and geriatric patients (because of its usual lack of toxicity and convenient syrup form). Why not extend its benefits to *all* your tense and anxious patients?

Dosage: For adults: 25 mg. t.i.d. to 100 mg. q.i.d. For children: under 6 years, 50 mg. daily; over 6 years, 50-100 mg. daily; in divided doses. *Supplied:* Tablets 10 mg. and 25 mg., in bottles of 100 and 500. Tablets 100 mg., in bottles of 100. Syrup 2 mg./cc., in pint bottles. Also available: Parenteral Solution. Prescription only.

References: 1. Garber, R. C.: J. Florida M. A. *45*:549 (Nov.) 1958. 2. Lipton, M. I.: Pennsylvania M. J. *64*:60 (Jan.) 1961. 3. Ayd, F. J., Jr.: Psychotropic Drugs, S. Garattini and V. Ghetti, eds., New York, Elsevier Publishing Co., 1957, p. 548. 4. McGettigan, D. L.: West. Med. *1*:8 (Jan.) 1960.

ATARAX®

PASSPORT TO TRANQUILITY

(brand of hydroxyzine HCl)

Roerig Rx

New York 17, N. Y.
Division, Chas. Pfizer & Co., Inc.
Science for the World's Well-Being®

VITERRA® Capsules—Tastitabs®
Therapeutic Capsules for
vitamin-mineral supplementation

Development of Heat Pyrexia

Evidence derived from a number of well-controlled experiments shows an increasing venous pressure and operational A-V shunt (or its functional equivalent) in the presence of cardiac failure during extreme heat exposure. It is postulated that the primary event in the circulatory collapse in victims of heat stroke is a high-output type of cardiac failure. In addition, it is postulated that the increase in venous pressure is ultimately responsible for the cessation of sweating seen in this syndrome. Older subjects were found to absorb more heat during a given exposure, and this presumably accounts for their increased susceptibility to heat stroke. Finally, it is proposed that intravenous administration of fluids in combination with simultaneous digitalization may well be an effective treatment for heat stroke, as an adjunct to the classic methods of rapid body cooling.

CAPT. JOSEPH GOLD (M.C.), U.S.A.F.

J.A.M.A. (1960) Vol. 173, No. 11, Pp. 1175-1182

Wegener's Granulomatosis

A case fulfilled the criteria for a diagnosis of the clinicopathological triad of Wegener's granulomatosis. This disease is characterized by necrotizing giant cell granulomatosis of the upper respiratory tract and lungs, necrotizing vesiculitis of the small arteries and veins, and focal glomerulonephritis. The duration of the patient's illness was one year and three months. The disease was clinically diagnosed one month ante mortem. The clinical course began with intractable rhinitis and sinusitis which was unresponsive to antibiotic therapy. Steroid therapy appeared to cause a five-month remission. This was followed by nodular infiltrates of the lungs with cavitation, arthralgia, peripheral neuritis, debilitation, and loss of vision of the right eye. Progressive renal failure then ensued.

JOHN B. MCDONALD, M.D. AND ROBERT W. EDWARDS, M.D.

J.A.M.A. (1960) Vol. 173, No. 11, Pp. 1205-1209

Continued on page 178a

Familial Hypogammaglobulinemia

The death from disseminated histoplasmosis of a patient with hypogammaglobulinemia, increased susceptibility to infection, splenomegaly and leukopenia led to an investigation of his family. Three of his six living children, a thirteen-year-old boy and six-year-old fraternal twin girls, were found to have a similar syndrome without evidence of infection with histoplasmosis. The patient's father had splenomegaly but no other features of this syndrome. The other members of the family had none of these abnormalities. In the involved members the level of gamma globulins and the degree of immunologic responsiveness, while depressed, were hypogammaglobulinemia. The evidence suggests that this apparently new clinical entity is an hereditary disturbance transmitted possibly by an autosomal dominant gene.

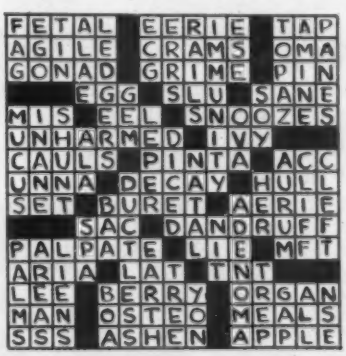
The etiological features of the known forms of hypogammaglobulinemia are reviewed and commented upon.

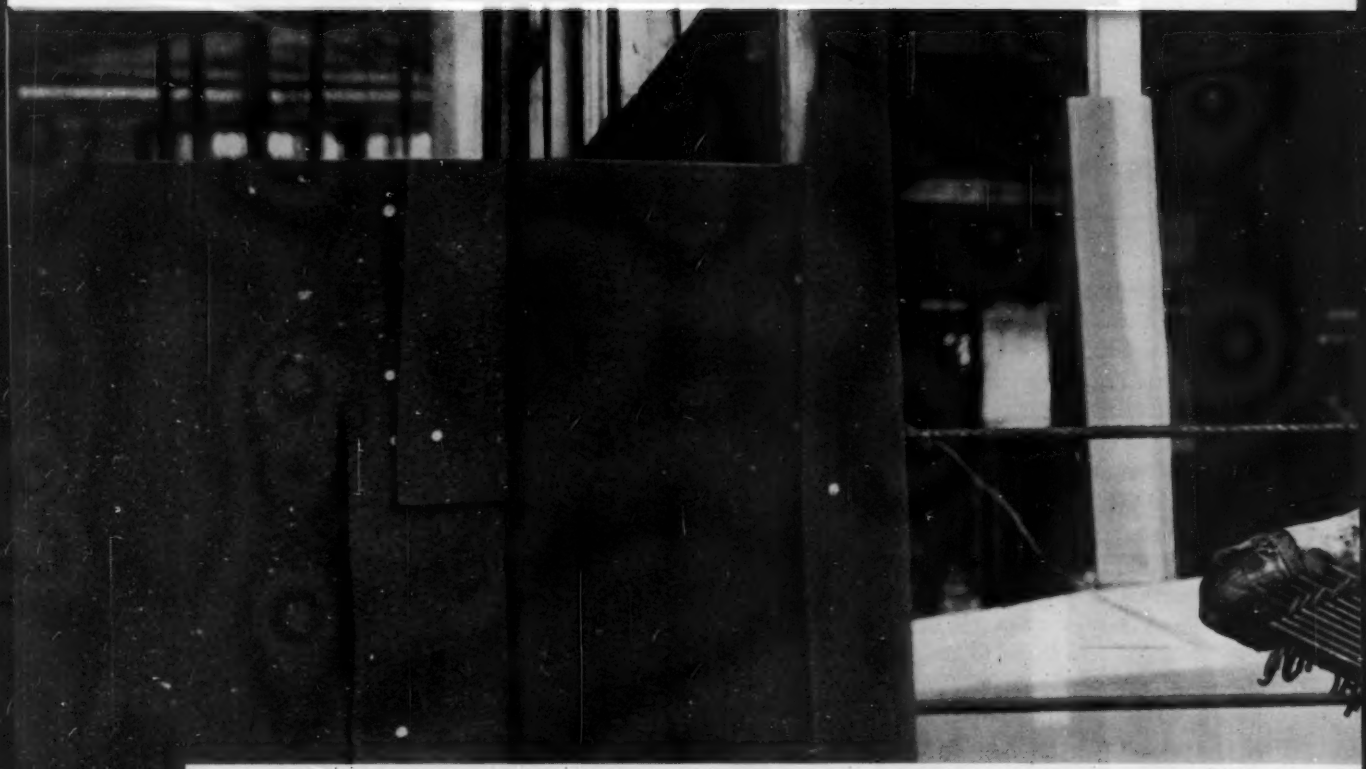
DANIEL S. KUSHNER, M.D., ALVIN DUBIN, M.S., WILLIAM P. DONLON, M.D. AND DAVID BRONSKY, M.D.

The Am. J. of Med. (1960), Vol. 29, No. 1, Pp. 33-42

MEDICAL TEASERS

Answer to puzzle on page 44a





Put your low-back patient back on the payroll

Soma's prompt relief of pain and stiffness can get your low-back patients back to work in days instead of weeks

Soma is unique because it combines the properties of an effective muscle relaxant and an independent analgesic in *a single drug.* Unlike most other muscle relaxants, which can only relax muscle tension, Soma attacks both phases of the pain-spasm cycle at the same time.

Thus with Soma, you can break up both pain and spasm fast, effectively . . . help give your patient the two things he wants most: relief from pain and rapid return to full activity.

Soma is notably safe. Side effects are rare. Drowsiness may occur, but usually only with higher dosages. Soma is available in 350 mg. tablets. Usual dosage is 1 tablet q.i.d.

The muscle relaxant with an independent pain-relieving action

SOMA®

(carisoprodol, Wallace)

Wallace Laboratories, Cranbury, New Jersey



How you can help save your patients a month's pay

Kestler reports in J.A.M.A. (April 30, 1960) that conventionally treated low-back syndrome patients required an average of 41 days for full recovery (range: 3 to 90 days). The addition of Soma therapy in this comparative investigation reduced the average to 11.5 days (range: 2 to 21 days). With Soma, patients averaged full recovery 30 days sooner.

In Vitro Polio-Virus Markers and Monkey Neurovirulence

Baselines of normally expected neuroactivity for each type of Lederle attenuated polioviruses in consecutive lots of vaccine were established by grading on a scale of 1 to 4 the spread of lesions from the site of inoculation in 574 monkeys inoculated intracerebrally with consecutive lots of vaccine. Relative neuroactivity of a vaccine lot was expressed as the sum of the percentage of animals showing grades 3 and 4.

The average incidence of combined grades 3 and 4 was 21% for type I, 57% for type II, and 16% for type III virus. The greater intracerebral activity of type II virus, which expresses itself in histopathological lesions and not in paralysis, is marked contrast to its clinical behavior in man, where it shows the least "aggressiveness" of the three poliovirus strains, and to its marker pattern, which conforms most closely to one proposed for avirulence.

All three Lederle poliovirus strains possess the t—character, which appears to have the best correlation with monkey avirulence, but differ in their d and MS markers; type I was found to be d ± MS±; and type II was d± MS—;and type III was d + $_M$S +. Some of the discrepancies in the correlation between markers and monkey virulence are discussed.

VICTOR J. CABASSO, SC.D., ERWIN L. JUNGHERR, D.V.M., SEYMOUR LEVINE, PH.D., ARDEN W. MOYER, PH.D., MANUEL ROCA-GARCIA, M.D. AND HERALD R. COX, SC.D.

The Brit. Med. J. (1960) No. 5193, Pp. 188-191



"The air conditioner's fixed . . ."

Hereditary Persistence of Fetal Hemoglobin

An abnormality of the red cells manifested by persistence of the fetal hemoglobin was traced through three generations of a Negro family. This anomaly appears to be genetically determined by a factor allelic with the genes for hemoglobins A, S and C. The primary effect of this genetic disorder is unknown, but quite possibly is a failure of production of hemoglobin A, with formation of fetal hemoglobin occurring as an indirect result.

In members of the family who showed persistence of fetal hemoglobin together with hemoglobin A, there were no clinical or hematologic abnormalities other than the presence of fetal hemoglobin in high concentration.

Three members of the family had inherited the gene for hemoglobin S in addition to that resulting in persistence of fetal hemoglobin. These persons appeared to be well and had none of the manifestations of sickle cell anemia. Nevertheless their red cells contained predominantly hemoglobin S, and hemoglobin A could not be detected in their red cell hemolysates. The benign nature of this disorder is probably attributable to the presence of fetal hemoglobin in high concentration in the red cells and the resultant resistance to sickling.

EMERY C. HERMAN, JR. AND C. LOCKARD CONLEY

The Am. J. of Med. (1960), Vol. 29, No. 1, Pp. 9-17

Concluded on page 182a

When the stomach has a nervous patient!



BUTIBEL®

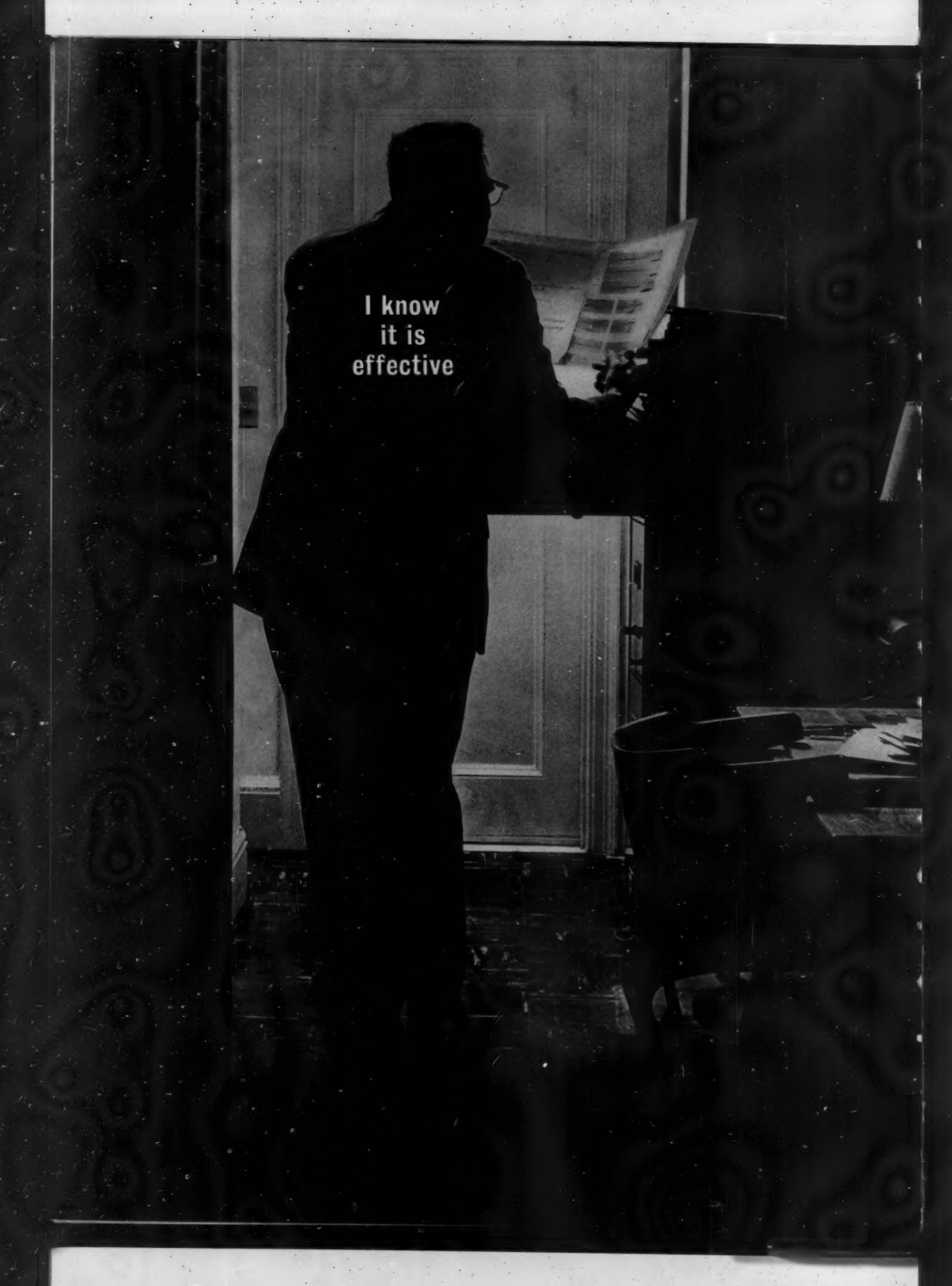
antispasmodic/sedative

relaxes the tense patient and his jittery stomach...without the sedative "build-up" many patients experience with phenobarbital preparations.

BUTIBEL combines the "time-matched" components—BUTISOL SODIUM® butabarbital sodium 15 mg. and extract of belladonna 15 mg.—each having approximately 5 hours' duration of effect. Thus, with Butibel there is no overlapping sedation, no antispasmodic gap—t.i.d. dosage keeps the patient comfortable without sluggishness.

Available as: BUTIBEL Tablets • Elixir • Prestabs® Butibel R-A (Repeat Action Tablets)

McNEIL McNEIL LABORATORIES, INC., Fort Washington, Pa.


I know
it is
effective

McNEIL LABORATORIES, INC., Fort Washington, Pa.



The continuing clinical effectiveness of Terramycin therapy derives as always from its proven antibiotic characteristics—rapid absorption; notably wide distribution in body tissues and fluids; high, active urinary concentrations; and a broad anti-infective spectrum embracing even such a troublesome organism as Pseudomonas. Additionally, Terramycin therapy provides the assurance of a 10-year record of exceptional toleration.

Cosa-Terramycin®

OXYTETRACYCLINE WITH GLUCOSAMINE

today's oral *form of Terramycin*

IN BRIEF

Cosa-Terramycin provides oxytetracycline (Terramycin®) with glucosamine for maximum absorption.

INDICATIONS: Because oxytetracycline is effective against both gram-positive and gram-negative bacteria, rickettsiae, spirochetes, large viruses, and certain parasites (amebae, pinworms), Cosa-Terramycin is indicated in a great variety of infections due to susceptible organisms, e.g., infections of the respiratory, gastrointestinal, and genitourinary tracts, surgical and soft-tissue infections, ophthalmic and otic infections, and many others.

ADMINISTRATION AND DOSAGE: Adults: 1 Gm. of oxytetracycline daily in four divided doses is usually effective. In *severe* infections, a larger dosage (2-4 Gm. daily) may be indicated. Infants and children: 10-20 mg. of oxytetracycline per lb. of body weight daily. Certain diseases are treated in courses.

SIDE EFFECTS AND PRECAUTIONS: Antibiotics may allow overgrowth of nonsusceptible organisms—particularly monilia and resistant staphylococci. If this occurs, discontinue medication and institute indicated supportive therapy and treatment with other appropriate antibiotics. Aluminum hydroxide gel has been shown to decrease antibiotic absorption and is therefore contraindicated. Glossitis and allergic reactions are rare. There are no known contraindications to glucosamine.

SUPPLIED: *Cosa-Terramycin Capsules,* 250 mg. and 125 mg. Terramycin is also available in: *Cosa-Terrabon® Oral Suspension,* a palatable preconstituted aqueous suspension containing 125 mg. per 5 cc. teaspoonful, bottles of 2 oz. and 1 pint; *Cosa-Terrabon® Pediatric Drops,* a palatable preconstituted aqueous suspension containing 5 mg. per drop (100 mg. per cc.), bottle of 10 cc. with calibrated plastic dropper; and *Terramycin Intramuscular Solution, conveniently preconstituted,* in the new 10 cc. multi-dose vial, 50 mg. per cc., and in 2 cc. prescored glass ampules, containing 100 mg. or 250 mg., packages of 5 and 100. In addition, a variety of other systemic and local dosage forms are available to meet specific therapeutic requirements.

More detailed professional information available on request.

Science for the world's well-being® Pfizer PFIZER LABORATORIES *Division, Chas. Pfizer & Co., Inc. Brooklyn 6, New York*

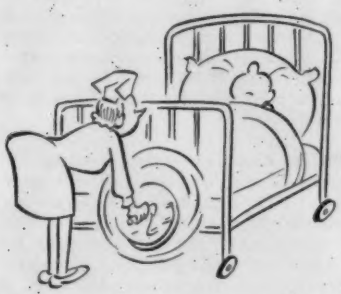
Severe Carbon Dioxide Intoxication

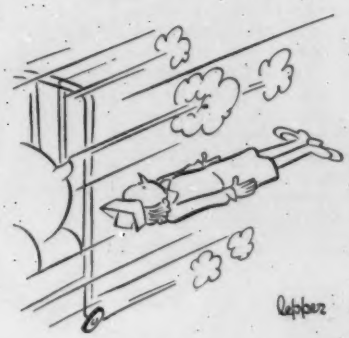
Infusions of an organic carbon dioxide buffer trihydroxymethylaminomethane (THAM) were given to three patients with chronic lung disease, superimposed infection, acute respiratory insufficiency, and carbon dioxide narcosis. In two of the patients (cases 1 and 2), infusions of THAM aided in correcting the respiratory acidosis and hypercapnia and complete clinical recovery occurred. One patient (case 3) did not respond to infusion of THAM and died. No side-effects were observed.

The mode of action of the drug is not clear, but apparently, by acting as a buffer, it increases the pH of the blood while lowering the carbon dioxide tension and increasing the total carbon dioxide content.

FELICE MANFREDI, M.D.,
HERBERT O. SIEKER, M.D.,
ANGELO P. SPOTO, M.D. AND
HERBERT A. SALTZMAN, M.D.

J.A.M.A. (1960), Vol. 173, No. 9, Pp. 999-1003





The Patient in Commercial Jet Aircraft

About 3% of airline passengers are ambulant patients. There is every reason to believe that more and more ambulant patients will fly in the future and that they will and should turn to their physicians for advice in this matter. In evaluating such a patient, the physician should formulate an opinion of the patient's ability to travel by air, specifically by jet aircraft. With few exceptions, the aeromedical problems in general, and an understanding of these will greatly aid in evaluation of the patient. Most patients who can travel at all can travel by air more comfortably and with less exhaustion.

LIEUT. COL. ROBERT B. STONEHILL (M.C.), U.S.A.F.

J.A.M.A. (1960), Vol. 173, No. 10, Pp. 1121-1123

Uricosuric Agents in Management of Gout

The introduction of sulfinpyrazone (Anturane®) and zoxazolamine (Flexin®) provides physicians with more potent drugs for increasing urate excretion. Like probenecid (Benemid®) they are of no value in treating acute attacks of gouty arthritis. They are, however, very useful in preventing or treating tophaceous gout, especially in patients who fail to respond to probenecid by an adequate lowering of the serum urate level, or in whom probenecid gives rise to adverse reactions. Studies on the effect of sulfinpyrazone and zoxazolamine on urate excretion indicate that their greater potency carries a correspondingly greater danger of precipitating uric acid in the urinary tract. Such a possibility can be minimized by providing a high fluid intake, alkalinizing the urine, and beginning therapy with low doses of these drugs. Maintenance colchicine is helpful in preventing acute attacks of gout that frequently accompany the institution of therapy with uricosuric agents.

J. E. SEIGMILLER, M.D. AND
ARTHUR I. GRAYZEL, M.D.

J.A.M.A. (1960), Vol. 173, No. 10, Pp. 1076-1080

BASIC!

in ear, nose and throat therapy



These six medications have demonstrated through clinical trials in countless patients outstanding qualities of effectiveness and safety—qualities that have led to White's pre-eminence as a manufacturer of specialties for E. N. T. therapy. The pages that follow are a concise reminder of the clinical advantages offered by each. Complete information concerning the use of these specialties is available on request.

WHITE LABORATORIES, INC. / Kenilworth, New Jersey

Otobiotic®

3.5 mg. neomycin (from sulfate) and 50 mg. sodium propionate per cc.

Antibiotic/Antifungal EAR DROPS
"...Better results than ever before..."* in OTITIS EXTERNA & CHRONIC OTITIS MEDIA



• controls infection • reduces exudation • stops pruritus • physiologic pH • relieves pain • does not distort otic landmarks • virtually nonsensitizing and nonirritating

Available in 15 cc. dropper bottles.

*Lawson, G. W.: Postgrad. Med. 22:501 (Nov.) 1957

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YOUR ALLERGIC PATIENT REMAINS ASYMPTOMATIC AND ALERT!



Aspergum®

SOOTHES SORE THROATS

Available in handy pocket-packs of 16 and bottles of 36.



WHITE LABORATORIES, INC. / Kenilworth, New Jersey

Otobione®

ANTI-INFLAMMATORY/Antibiotic/Antifungal Sterile EAR DROPS



Physiologic pH

Effective relief in 82% of 3334 cases* of external otitis, chronic otitis media and chronic mastoiditis with otorrhea. FORMULA: Prednisolone acetate, 5 mg., neomycin (from sulfate), 3.5 mg. and sodium propionate, 50 mg. per cc. Available in 5 cc. bottles with "steri-sealed" dropper. *Case reports on file, White Laboratories, Inc.

Disophrol



In nasal congestion and rhinorrhea due to head colds, allergies and sinusitis—

Decongests Nasal and Sinus Passages...
Dries Mucous Secretions!

A sensibly simple formula: Disomer (dexbrompheniramine maleate) 2 mg., d-isoephedrine sulfate 60 mg. Available in bottles of 100 scored tablets.

Orabiotic®

chewing gum troches

For oropharyngeal infections...
"A BACTERIOSTATIC BATH"* Releases a soothing flow of saliva that bathes sore throats with effective antibiotic and analgesic medications. Nonirritating and virtually nonsensitizing. Always a useful adjunct to systemic therapy.

FORMULA: Each troche contains Neomycin, 3.5 mg., Gramicidin, 0.25 mg., and Propesin, 2.0 mg. Available in packages of 10 and 20.

PROTECTS AGAINST SECONDARY HEMORRHAGE FOLLOWING TONSILLECTOMY

- reduces local postoperative pain and muscle spasm
- speeds resumption of normal diet by lessening postoperative discomfort



*Granberry, C., and Beatrous, W. P.: E.E.N.T. Mo. 36:294 (May) 1957.

White WHITE LABORATORIES, INC. / Kenilworth, New Jersey



A Superb Gift

This imported decorator's piece makes an outstanding gift
or prize that surely will be treasured by its recipient.
Combining grace and a touch of humor,
it will add a note of charm to a physician's office or home.

Styled and hand-painted by Italian artists,
the glazed ceramic stands one foot high.
Price: $19.75 each.

MEDICAL TIMES OVERSEAS, INC. DEPT. M, 1447 NORTHERN BOULEVARD, MANHASSET, N. Y.

A SAVINGS ACCOUNT HELPS PROVIDE A SECURE FUTURE

ELDEC®

mineral-vitamin-hormone formula

KAPSEALS®

HELP PROVIDE A HEALTHY ONE

by supplying a dependable source of vitamins, minerals, hormones, and digestive enzymes.

- vitamins to help maintain cellular function and to prevent and correct vitamin deficiencies
- digestive enzymes to aid in offsetting decreased natural production
- gonadal hormones to stimulate metabolism and help prevent or correct protein depletion states

Each ELDEC Kapseal contains vitamins—1,667 units A, 0.67 mg. B_1 mononitrate, 0.67 mg. B_2, 0.5 mg. pyridoxine hydrochloride, 0.033 N. F. Unit (Oral) B_{12} with intrinsic factor concentrate, 0.1 mg. folic acid, 33.3 mg. C, 16.7 mg. nicotinamide, 10 mg. *dl*-panthenol, 6.67 mg. choline bitartrate; minerals—16.7 mg. ferrous sulfate (exsiccated), 0.05 mg. iodine (as potassium iodide), 66.7 mg. calcium carbonate; digestive enzymes—20 mg. Taka-Diastase® (Aspergillus oryzae enzymes), 133.3 mg. pancreatin; amino acids—66.7 mg. *l*-lysine monohydrochloride, 16.7 mg. *dl*-methionine; gonadal hormones—1.67 mg. methyltestosterone, 0.167 mg. Theelin.

Indications: To supplement other sources of vitamins, minerals, hormones, digestive enzymes, and amino acids.

Dosage: One Kapseal three times daily before meals. Female patients should follow each 21-day course with a 7-day rest interval.

Precaution: Contraindicated in patients wherein estrogen or androgen therapy should not be used, as in carcinoma of the breast, genital tract, or prostate, and in patients with a familial tendency to these types of malignancy; give cautiously to females who tend to develop excessive hair growth or other signs of masculinization.

Packaging: ELDEC Kapseals are available in bottles of 100.

8276L

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan



NEWS AND NOTES

Selected items of current interest from the fields of medical research and education.

The Cuban Refugee

According to the Department of Health, Education and Welfare, there are approximately 66,000 Cubans who have come to this country since the trouble in their own land. Many of these displaced persons are physicians and surgeons. In order to live they are accepting any sort of odd job, frequently including manual labor. While these doctors cannot practice in this country until they are accredited, an effort is being made to place them where their technical knowledge can be utilized.

The University of Miami is making an outstanding contribution. Together with generous financial aid from a number of pharmaceutical and professional organizations, a special postgraduate refresher course in medicine has been organized by Dr. Ralph Jones, Jr., Professor and Chairman of the Department of Medicine of the University. The course provides free-of-charge a three-month intensive program in both basic science and clinical subjects. At the conclusion of the course, most of the Cuban physicians plan to take the examination given by the Educational Council for Foreign Medical Graduates. Passing this test would permit them to work as interns and residents in United States hospitals. In some states, they would also be allowed to take state examinations for medical licenses to practice.

The National Committee for the Resettlement of Foreign Physicians has established an office in Miami to help the physicians find other locations in which to settle. The matter of the resettlement of foreign physicians offers many problems, since each state has its own rules for licensure.

Palm Reading Offers Clue to Heart Disease

The pattern of lines on the palm of the hand may offer a clue to the presence of congenital heart disease, said an article in the J.A.M.A.

A correlation between the location of some lines and congenital heart defects was reported by Drs. Alfred R. Hale, John H. Phillips, and George E. Burch, Tulane University School of Medicine, New Orleans.

The researchers drew their conclusion from a comparison of the palm prints of 157 patients suffering congenital ailments and 143 patients who had acquired forms of heart disease.

The intricate patterns on the palm appear between the fourth and sixth month following conception, the physicians explained. Defects in development of the unborn child during this time may influence the lines on the palm and thus reflect developmental disturbances operative during this period, they said.

Except for growth, they said, these configurations once established never change throughout a person's life.

The authors pointed out that a relationship between particular palm line characteristics and specific types of congenital heart defects "awaits the collection of a large series of proved cases."

Continued on page 190a

a pair of gynecologic patients:



both are free of pain—but only one is on

DILAUDID®

(Dihydromorphinone HCl)

swift, sure analgesia normally unmarred by nausea and vomiting

DILAUDID provides unexcelled analgesia before and after gynecologic, obstetric and surgical procedures. Its high therapeutic ratio is commonly reflected by lack of nausea and vomiting — and marked freedom from dizziness, somnolence, anorexia and constipation.

▲ by mouth ▲ by needle ▲ by rectum

2 mg., 3 mg., and 4 mg.

May be habit forming—usual precautions should be observed as with other opiate analgesics.

KNOLL PHARMACEUTICAL COMPANY • ORANGE, NEW JERSEY

Albany Medical College

The Albany Medical College of Union University (New York) has become one of the first American medical schools to grant departmental status to its division of postgraduate medicine. Dr. Frank M. Woolsey, Jr., Division Director and Associate Dean of the College, has been named Professor and Chairman of the new department. More than 1,000 physicians currently participate in one or more phases of the Department's educational program. Dr. Woolsey, who was appointed Director of Postgraduate Education at Albany Medical College in 1954, has introduced a number of innovations. Recognizing that many doctors are too busy to travel long distances for postgraduate programs, he developed a technique for broadcasting these programs via two-way radio. The college now has an FM radio station for this purpose, enabling it to reach a network of 30 hospitals within a 100-mile radius of Albany.

Care of the Hospitalized Child

According to a study published by the World Health Organization, a child staying in a hospital benefits from the company of its mother. However, the idea of admitting the mother to the hospital along with the young patient remains a highly controversial issue. Separation from the mother when the child is in pain can be a terrifying experience inflicting lasting damage. The study indicated that the presence of the mother does much to alleviate the child's terror and helps the child to bear the pain arising from surgery and treatment. When they are admitted, the mother may give the hospital staff additional work because she must be oriented and taught. However, the end result means much less work, for the mother can take care of details normally entrusted to nurses. The study of the World Health Organization was based on opinions reached at a recent seminar in Vienna attended by pediatricians, nurses and psychologists from 21 countries.

Continued on page 195a

TRICHOMONADS EXPLODE



1. VAGISEC liquid and jelly penetrate and dissolve vaginal mucus, exposing even deeply embedded trichomonads.

2. VAGISEC's three active ingredients* permeate the cell's membrane, remove waxes and lipids, denature proteins.

3. Water is forced through the weakened cell wall, causing trichomonad to swell and explode. All within 15 seconds of contact.

Specific therapy for vaginal trichomoniasis VAGISEC® liquid and jelly. "Many other chemicals stop motion and we have assumed that the organisms are dead, but with [VAGISEC] there can be no doubt, since only fragments remain."[1]

The first office treatment with VAGISEC brings immediate symptomatic relief. With the very first office treatment, Decker[2] achieved *immediate* relief of acute symptoms in all 64 cases of acute trichomoniasis studied.

Cure rates as high as 96% with VAGISEC confirmed by negative cultures for three consecutive months. Roberts and Sullivan[3] successfully treated 96% (48 of 50) vaginal trichomoniasis patients with VAGISEC, all of whom remained flagellate free, as proved by repeated negative cultures for three months after treatment. Giorlando and Brandt,[4] and Weiner[5] were equally successful with VAGISEC, curing 93.1% (54 patients of 58), and 90.2% (46 patients of 51) respectively, by means of the VAGISEC technique.

To prevent re-infection—RAMSES® for the husband. As Romney[6] points out, ". . . therapy which is directed solely towards the female patient is unrealistic and ineffectual." Husbands readily cooperate when you prescribe RAMSES, the prophylactic with "built-in" sensitivity.

References: 1. Davis, C. H.: West. J. Surg. *63*:53 (Feb.) 1955. 2. Decker, A.: New York J. Med. *57*:2237 (July 1) 1957. 3. Roberts, C. L., and Sullivan, J. J.: West. Med. *1*:12 (Apr.) 1960. 4. Giorlando, S. W., and Brandt, M. L.: Am. J. Obst. & Gynec. *76*:666 (Sept.) 1958. 5. Weiner, H. H.: Clin. Med. *5*:25 (Jan.) 1958. 6. Romney, S. L.: M. Sc. *8*:235 (Aug. 25) 1960.

VAGISEC and RAMSES are registered trade-marks of Julius Schmid, Inc.

VAGISEC® liquid and jelly

**Active ingredients in VAGISEC liquid:* Polyoxyethylene nonyl phenol, sodium ethylene diamine tetra-acetate, sodium dioctyl sulfosuccinate. In addition, VAGISEC jelly contains alcohol 5% by weight.

Julius Schmid, Inc. 423 West 55th Street New York 19, N. Y.



this is
PLEXONAL
(ACTUAL SIZE AND SHAPE)

* Optimum results are obtained by gradually increasing the dosage to the maximum the patient can tolerate without the appearance of drowsiness. The following procedure for dosage adjustment has proven highly successful:

Take one tablet 2 times per day for 2 days. On the third day increase the daily dosage by one tablet. Similarly increase the dose every third day thereafter, to the point of drowsiness.

For example, if one tablet 4 times a day produces an obvious sleepy feeling, and on three the patient is comfortable, then the proper dose will be three tablets per day.

a superior daytime relaxing agent

(NOT A TRANQUILIZER)

PLEXONAL®

Comparative clinical studies show that PLEXONAL is superior to meprobamate or barbiturates for daytime relaxation[1,2]

"Plexonal was preferred (superior therapeutic effect) by 73.7 per cent of the patients, whereas 11.1 per cent preferred meprobamate, a ratio of 6.6 to 1. . . . 30.5 per cent noted adverse reactions to meprobamate as compared to 7 per cent in respect to Plexonal. . . . Plexonal gave better results than did any of the sedative or relaxing agents that have been available during our experience covering the previous 15 years."[1]

In 26 older age cardiac patients, "A comparison of Plexonal with the therapy previously employed showed that 17 did better on Plexonal than on meprobamate, 6 did better on meprobamate than on Plexonal and 3 responded the same to both."[2]

Indications: Anxiety, tension, apprehension, nervousness, irritability, restlessness, hyperexcitability.

Extremely well tolerated by geriatric patients who need mild sedation, as well as by depressed patients.

Dosage: One tablet 3 or 4 times a day is adequate for most patients. However, some require up to six tablets per day, whereas others respond adequately to as little as 1 tablet per day.*

Composition: Each tablet contains sodium diethylbarbiturate 45 mg., sodium phenylethylbarbiturate 15 mg., sodium isobutylallylbarbiturate 25 mg., scopolamine hydrobromide 0.08 mg., dihydroergotamine methanesulfonate 0.16 mg.

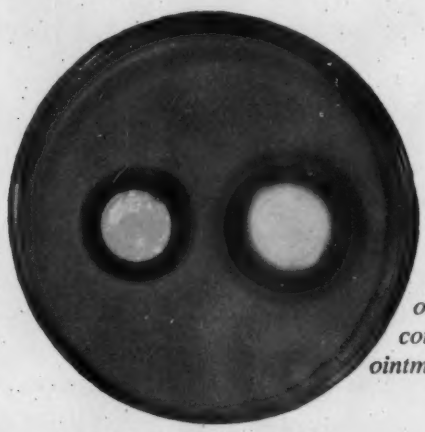
1. Scheifley, C. H.: Proc. Staff Meet. Mayo Clin. 34:408 (Aug. 19) 1959.
2. Davanloo, H.: Am. J. of Psychiat. 117:740 (Feb.) 1961.

ORIGINAL RESEARCH SERVING THE PHYSICIAN

SANDOZ

If 2 ointments contain the same antibiotics, how can one be more effective?

...The unique base* of Neo-Polycin releases a greater concentration of antibiotic into the lesions.



Neo-Polycin Ointment on right conventional grease-base ointment on left

Agar incubations show Neo-Polycin® Ointment more effective against common topical pathogens

This agar plate, containing *Staph. aureus*, was incubated for 24 hours at room temperature. Note the greater zone of inhibition around Neo-Polycin Ointment (right), than around the grease-base ointment of comparable antibiotic content (left). Tests on the following pathogens gave similar results: *beta hemolytic strep., E. coli, Proteus vulgaris, Pseudomonas aeruginosa.* Higher concentrations of antibiotics released from Neo-Polycin tend to inhibit the growth of relatively resistant strains and minimize antibacterial resistance created by sub-effective concentrations.

formula: Each gram of Neo-Polycin Ointment contains 4.28 mg. neomycin sulfate (3 mg. neomycin base), 400 units zinc bacitracin, 8000 units polymyxin B sulfate.

*FUZENE®—a patented base which is miscible with blood, pus, tissue exudates.

PITMAN-MOORE COMPANY PM DIVISION OF THE DOW CHEMICAL COMPANY INDIANAPOLIS 6, INDIANA

Woman's Medical College of Pennsylvania

The Women's Medical College of Pennsylvania has been augmented by a seven-story building to be used primarily for research. The new facility has made possible an increase of 20 percent in the number of students accepted. The cost of the $2,869,000 structure was met by gifts of donors aided by a government grant.

Lederle Awards

Fifteen outstanding members of medical school facilities will share $250,000 this year under the Lederle Medical Faculty Awards Program.

The awards are made annually to help sustain the high caliber of medical education in the United States and Canada, according to Dr. B. W. Carey, Medical Director of Lederle Laboratories, a division of American Cyanamid Company.

The program is administered by an independent awards committee composed of seven leading medical educators. Chairman of the committee, which has full authority for selecting recipients, is Dr. Maxwell Finland, Associate Professor of Medicine, Harvard Medical College, and Associate Director, Thorndike Memorial Laboratory, Boston City Hospital.

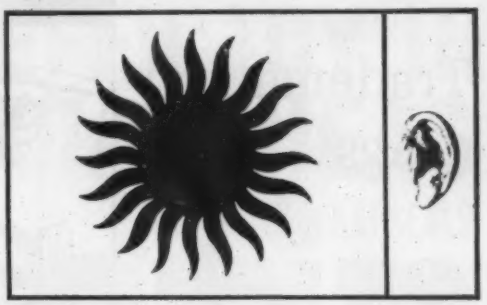
Dr. Carey said that since the program started in 1954, Lederle has allocated more than $2 million to 120 faculty members in 59 United States and Canadian medical schools.

Dr. Finland said the purpose of the awards "is to assist able men and women to achieve their objective of full time academic and research careers and to enable medical schools develop promising clinical teachers and scholars."

"The awards committee is pleased to note that 110 recipients have chosen to remain in academic posts. The records, although not yet complete, show that since the program was initiated, seven awardees have been appointed department heads, and 58 have been advanced in academic rank."

Continued on page 200a

for better control
of otitis externa



NEW

Neo-Polycin® HC Otic

relieves pain
stops itching
reduces inflammation
combats infection



For a complimentary trade size package of new NEO-POLYCIN HC Otic, write to Professional Services Department—

PITMAN-MOORE COMPANY
DIVISION OF THE DOW CHEMICAL COMPANY
INDIANAPOLIS 6, INDIANA

Trademarked drugs . . .



or "drugs anonymous"?

In the field of medicine, as almost everywhere else in a free economy, the trademark concept has evolved over the years. As with most human institutions, there are some who may not consider it ideal; but it has brought about three signal benefits:

To the physician it gives assurance of quality in the drugs he prescribes—assurance backed by the biggest asset of the maker, his reputation.

To the manufacturer it gives one of the greatest possible incentives to produce new and better curative agents.

To the pharmacist it gives preparations which he can dispense with confidence.

If trademarks are done away with, a whole new setup must be created:

1. An enormously expanded, expensive system of government quality control.

2. A new system of generic nomenclature which would magically turn out names not only rememberably simple, but also conforming to the principles of complex chemical terminology.

3. Something new to fill the gap left by the elimination of the trademark incentive to produce new and better drugs.

The American system has been pre-eminent in producing and distributing good medicines. Above all it has been successful in creating new advances in therapy. In a dubious effort to provide cheaper medicines by abolishing the trade names upon which the responsible makers stake their reputations, let us beware of sacrificing this success.

This message is brought to you on behalf of the producers of prescription drugs to help you answer your patients' questions on this current medical topic. For additional information, please write **Pharmaceutical Manufacturers Association,** *1411 K Street, N. W., Washington 5, D.C.*

FOR PROVEN EFFICACY IN INFECTIOUS DIARRHEAS

Humatin® KAPSEALS

(paromomycin, Parke-Davis)

A WELL-TOLERATED ANTIBIOTIC-AMEBICIDE

HUMATIN possesses high antibacterial and antiamebic activities, coupled with a low order of oral toxicity.[1] Because it is effective against many gram-negative pathogens, HUMATIN has proved valuable in the treatment of infectious diarrheas and other enteric infections, most of which are caused by bacilli of the gram-negative group.[2-5] Characteristic of the favorable response to HUMATIN is a prompt reduction in the number of stools per day, a decrease in fever, and rapid alleviation of other symptoms of infection.[2,3,5] HUMATIN is also useful in all phases of intestinal amebiasis,[1,5-12] and has shown promise of being useful in the preoperative suppression of intestinal flora,[5] and in the adjunctive management of hepatic coma.[13-15]

HUMATIN is not appreciably absorbed from the gastrointestinal tract and is, therefore, not effective against systemic infections. Systemic toxicity has not been a problem. *See medical brochure for details of administration, precautions, and dosage.*

SUPPLIED: HUMATIN (paromomycin, Parke-Davis) is available as the sulfate in Kapseals,® each containing the equivalent of 250 mg. of base, in bottles of 16.

REFERENCES: (1) Coffey, G. L., *et al.: Antibiotics & Chemother.* 9:730, 1959. (2) Courtney, K. O.; Thompson, P. E.; Hodgkinson, R., & Fitzsimmons, J. R.: *Antibiotics Annual* 7:304, 1959-1960. (3) Godenne, G. D.: *ibid.*, 310. (4) McMath, W. F. T., & Hussain, K. K.: *Pub. Health* 73:328, 1959. (5) Personal Communications to Department of Clinical Investigation, Parke, Davis & Company, 1959. (6) Shafei, A. Z.: *Antibiotic Med. & Clin. Therapy* 6:275, 1959. (7) Lopez Elias, F., & Oliver-Gonzalez, J.: *Antibiotic Med. & Clin. Therapy* 6:584, 1959. (8) Carter, C. H.: *Antibiotic Med. & Clin. Therapy* 6:586, 1959. (9) Thompson, P. E., *et al.: Antibiotics & Chemother.* 9:618, 1959. (10) Dooner, H. P.: *Antibiotic Med. & Clin. Therapy* 7:486, 1960. (11) Coles, H. M. T., *et al.: Lancet* 1:944, 1960. (12) Moffett, H. F., & Toh, S. H.: *Antibiotic Med. & Clin. Therapy* 7:569, 1960. (13) Fast, B. B.; Wolfe, S. J.; Stormont, J. M., & Davidson, C. S.: *Arch. Int. Med.* 101:467, 1958. (14) Mackie, J. E.; Stormont, J. M.; Hollister, R. M., & Davidson, C. S.: *New England J. Med.* 259:1151, 1958. (15) Stormont, J. M.; Mackie, J. E., & Davidson, C. S.: *New England J. Med.* 259:1145, 1958.

1905S

PARKE-DAVIS

PARKE, DAVIS & COMPANY, Detroit 32, Michigan

Equilibrium for the epileptic



Better control of seizures, plus the emotional support of "physician-educated" parents, can greatly aid the child with epilepsy to prepare for normal social relationships—before she starts school.

Mebaral offers highly effective control of most types of epilepsy, especially major motor seizures in children. It reduces the number and severity of seizures—without producing sedative daze or lowering learning capacity.

Mebaral is unsurpassed in safety. It is one of the best tolerated and "...least upsetting of all forms of therapy"[1] for epilepsy. Even when used repeatedly year after year, Mebaral rarely produces toxic reactions or ill effects.

Mebroin®, a synergistic combination of Mebaral and diphenylhydantoin, provides maximal control of seizures with minimal toxicity. Side effects are infrequent. Each relatively tasteless tablet combines 90 mg. of Mebaral with 60 mg. of diphenylhydantoin.

1. Robertson, E. G.: *Postgrad. Med.* 25:31, Jan., 1959.

For epilepsy at any age

Mebaral®

Brand of mephobarbital

Mebaral dosage: Children under 5 years, from 16 to 32 mg. (¼ to ½ grain) three or four times daily; over 5 years, from 32 to 64 mg. (½ to 1 grain) three or four times daily. Adults, from 400 to 600 mg. (6 to 9 grains) daily.

Mebroin dosage: Children under 6 years, ½ tablet once or twice daily; over 6 years, 1 tablet two or three times daily. Adults, 1 or 2 tablets three times daily (average dosage).

How Supplied: Mebaral tasteless tablets of 200 mg. (3 grains), 100 mg. (1½ grains), 50 mg. (¾ grain), and 32 mg. (½ grain), bottles of 100. Mebroin virtually tasteless tablets, bottles of 100 tablets.

Winthrop LABORATORIES
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new Tandearil Geigy

brand of oxyphenbutazone



a new development in nonhormonal, anti-inflammatory therapy

more specific than steroids—
Acts directly on the inflammatory lesion **without** altering pituitary-adrenal function . . . **without** impairing immunity responses.[8,11]

more dependable than enzymes—
Rapid and complete absorption, without the uncertainty of oral or buccal enzyme therapy.[8]

more potent than salicylates—
Anti-inflammatory potency of Tandearil markedly superior to aspirin.[13]

Remarkably useful in a wide variety of inflammatory conditions, including: rheumatoid arthritis, spondylitis, osteoarthritis[1,2,3]; gout[1,4,5]; acute superficial thrombophlebitis[6,7]; painful shoulder (peritendinitis, capsulitis, bursitis, and acute arthritis of that joint)[1,4]; severe forms of a variety of local inflammatory conditions[8,9,10].

The physician should be thoroughly familiar with the dosage, side effects, precautions and contraindications of Tandearil before prescribing. Full product information available on request.

Round, tan, sugar-coated tablets of 100 mg. in bottles of 100 and 1000.

References:
1. Graham, W.: Canad. M.A.J. 82:1005 (May 14), 1960. 2. Vaughn, P. P.; Howell, D. S., and Kuhn, I. M.: Arth. and Rheumat. 2:12, 1959. 3. O'Reilly, T. J. J.: Irish M.A. 48:106, 1960. 4. Connell, J. F., Jr., and Rousselot, L. M.: Am. J. Surg. 98:31, 1959. 5. Brodie, B. B., et al.: In Contemporary Rheumatology 1958, p. 600. 6. Stein, I. D.: Ann. N. Y. Acad. Sc. 86:307 (March 30) 1960. 7. Barczyk, W., and Roth, W.: Praxis 49:689, 1960. 8. Miller, J. M., et al.: Antibiotic Med. and Clin. Rousselot, L. M.: Am. J. Surg. 97:422, 1959. 10. Summary of individual case histories submitted to Geigy. 11. Domenjoz, R.: Ann. N.Y. Acad. Sc. 86:283, 1960. 12. Smyth, C. J.: Ann. N. Y. Acad. Sc. 86:292, 1960.

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Home Treatment Program for Psychosis

Offering hope that state mental institutions can reduce their increasing admission rates, a research program of preventive hospitalization in psychiatric emergencies, directed by a Boston University professor, has effectively provided adequate home treatment for 50 percent of referred acute psychotic cases. The Home Care Service of Boston State Hospital is currently headed by Dr. Walter E. Barton, Superintendent of the Boston State Hospital and Associate Professor of Psychiatry at the Boston University School of Medicine.

The Boston State Hospital is located in Dorchester, which was selected as the study area because its 100,000 inhabitants belong predominantly to the middle and lower income groups with mixed ethnic and religious backgrounds. The Home Care Service plan has resulted in home treatment for half of the patients thus avoiding institutional confinement. Patients who could not be dealt with effectively were generally paranoids and schizophrenics—often with suicidal tendencies.

The geriatric research involved extensive interviews with 75 geriatric patients admitted to the hospital, their families, friends and associates, to get as complete a picture as possible of the needs of older people, and to discover where in their lives these needs were not being provided. The data helped to establish the community resources needed to allow these people to remain in their home communities instead of being confined in mental institutions.



"Perhaps I could save some time if I told you just what was right with you."

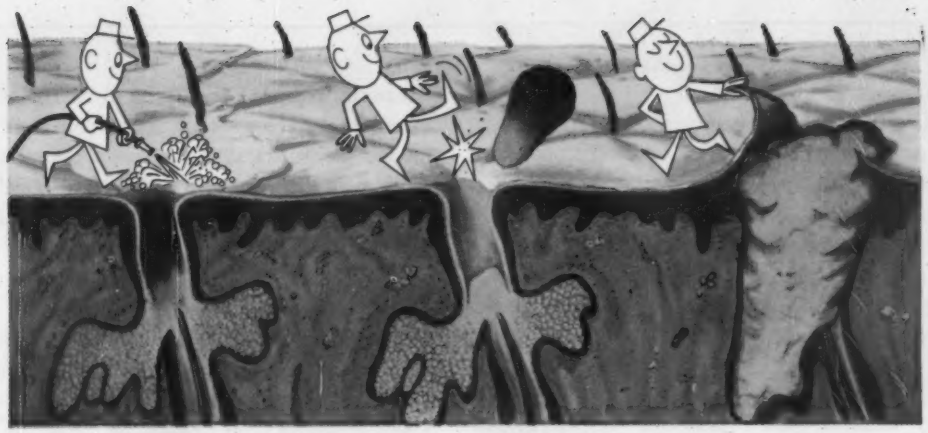
New Director of Surgery at Mount Sinai

The appointment of Dr. Allan E. Kark of South Africa as Director of the Surgery Department at Mount Sinai Hospital, New York City, has been announced. After arriving in the United States, he will visit a number of hospitals before assuming his post. The Doctor is Chairman of the Surgery Department at the University of Natal in Durban. He is a member of the university senate, and has served as acting dean and chairman of the faculty of medicine. He is a member of the Royal College of Physicians and a fellow of the Royal College of Surgeons.

National Medical Foundation for Eye Care

A greatly expanded program of information to the public on the meaning and value of good eye care is planned for 1961 by the National Medical Foundation for Eye Care. The foundation was organized in 1956 as a public educational agency for American ophthalmology, and most of its 3,000 members are Diplomates of the American Board of Ophthalmology. The foundation's public information program has several main features: 1. A series of monographs on major socioeconomic and organizational problems confronting ophthalmologists. 2. A series of pamphlets on eye care topics, of which nearly 3,000,000 copies have been distributed largely through physicians' offices. 3. An information and advisory service for popular magazine editors and science writers. 4. Periodic stories and educational material for medical journals, newspapers, and radio-TV outlets.

Continued on page 202a



Fostex® treats pimples·blackheads·acne while they wash

degreases the skin
helps remove blackheads
dries and peels the skin

Patients like Fostex because it's so easy to use. Instead of using soap, they simply wash acne skin with Fostex Cream or Fostex Cake 2 to 4 times daily.

Fostex contains: Sebulytic® base (unique, penetrating, surface-active combination of soapless cleansers and wetting agents*) with remarkable antiseborrheic, keratolytic and antibacterial actions . . . enhanced by micropulverized sulfur 2%, salicylic acid 2% and hexachlorophene 1%.

***sodium lauryl sulfoacetate, sodium alkyl aryl polyether sulfonate and sodium dioctyl sulfosuccinate.**

Fostex Cream and Fostex Cake are interchangeable for therapeutic washing of the skin. Fostex Cream is approximately twice as drying as Fostex Cake. Supplied: Fostex Cake—bar form. Fostex Cream—4.5 oz. jars. Also used as a therapeutic shampoo in dandruff and oily scalp.

And . . . since continuous 24-hour drying and peeling of acne skin is essential, FOSTRIL (a new, flesh-tinted drying lotion) should be used once or twice daily in addition to Fostex therapeutic washings. Fostril® contains Liposec® (polyoxyethylene lauryl ether), a new, surface-active drying agent used for the first time in acne treatment. This agent, with 2% micropulverized sulfur and a zinc oxide, talc and bentonite base, provides Fostril with excellent drying properties. Fostril also contains 1% hexachlorophene.

Available: Fostril, 1½ oz. tubes. Fostril-HC (½% hydrocortisone) 25 gm. tubes.

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Hypnosis

Legislation is now under consideration to place hypnosis under strict state controls as a medical technique. Only physicians and dentists would be allowed to use hypnosis as part of medical treatment. There is no state regulation at the present time. It is generally recognized that hypnosis, if improperly used, can affect patients adversely.

Dr. Edwin I. Hirsch

Dr. Edwin I. Hirsch has been appointed Director of the Department of Radiology of the new Gottlieb Memorial Hospital, Chicago. The Doctor is at present Associate Radiologist at Englewood Hospital and also diagnostic radiological consultant to the Veterans Administration Hospital at Dwight, Illinois. At Gottlieb Memorial Hospital, he will be in charge of the extensive radiology facilities, which will be among the outstanding medical services to be offered at the new 120-bed facility which is scheduled for completion in the first half of 1961.

Legalized Abortion No Solution

Liberalized laws passed since 1955 in Eastern Europe have resulted in a decline in criminal abortions and a marked increase in legal abortion, said a report in the J.A.M.A.

However, Drs. Christopher Tietze and Hans Lehfeldt, New York City, said "in none of the countries of Eastern Europe where interruption of pregnancy has recently been legalized is it considered a desirable method of fertility

Concluded on page 204a

PRURITUS ANI

ORAL TREATMENT FOR INTRACTABLE CASES

Complete relief in 80% of 46 cases

*"It was found that administration of Malt Soup Extract in dosages of one or two tablespoonfuls twice daily produced favorable results. Within two or three days after beginning this simple regimen, the itching and burning usually disappeared. Frequently there was prompt remission of symptoms which was followed by improvement in the condition of the tissue of the anal canal and the perianal skin."**

*Brooks, I. H., Diseases of the Colon & Rectum, Vol. 1, No. 5, Sept.-Oct., 1958.

In pruritus ani, stools are usually strongly alkaline. Maltsupex (Malt Soup Extract) encourages growth of aciduric bacteria in the intestines; feces become soft, have an acid reaction, and intractable rectal itching disappears.

Borcherdt's Maltsupex consists of specially processed non-diastatic barley malt extract neutralized with potassium carbonate.

DOSE: 2 tbs. A.M. and P.M. Take in milk, water, or by spoon. Continue for 2 to 3 weeks, when perianal skin should be healed. Resume treatment if symptoms recur.

Borcherdt's MALTSUPEX® (MALT SOUP EXTRACT) POWDER LIQUID

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Supplement

". . . human milk fat contains more than three and one-half times as much of the so-called 'essential' fatty acids as cow's milk . . ."[1]

POLYMUL®, a unique combination of these polyunsaturated fatty acids protected by antioxidant tocopherols, added to cow's milk formulas restores the balance of unsaturated fatty acids to more nearly resemble mother's milk.

POLYMUL . . . improves the nutritional value of cow's milk formulas.

Each 1 cc. POLYMUL 'dispensulet' contains 950 mg. of unsaturated fatty acid glycerides providing:

Linoleic & Linolenic Acids	600 mg.
Tetra, Penta, & Hexaenoic Acids	100 mg.
Oleic & Saturated Acids	150 mg.
Mixed Tocopherols	5 mg.
Polysorbate 80	50 mg.

Dosage: 2 to 4 cc. per day. Average dose 3 cc. per day. Contents of 3 POLYMUL 'dispensulets' in formula after sterilization or one 'dispensulet' to 4 ounces of formula for three feedings.

Supply: Convenient, accurate 'dispensulets' (1 cc.) in dispensing carton of 100 — over one month's supply.

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1. Williams, H. H.: Report to Council on Foods and Nutrition, J.A.M.A. 175: 104 (Jan. 14) 1961

control by responsible leaders of the medical profession."

"The intention is that abortion be eventually replaced by contraception," they said, "and efforts are being made to educate the public in that direction by means of pamphlets, lectures, films, radio, television, etc."

Following Russia's example in 1955, the authors said, most of the countries of Eastern Europe adopted legislation permitting an abortion at the request of the pregnant woman or on very broadly interpreted social indications. The stated aims of this legislation are to "abolish abortion performed elsewhere than in health institutions" and "to give women the right to decide on their maternity," they added.

Citing figures from Hungary, Czechoslovakia, Bulgaria, and Poland, the two physicians said the "new legislation has resulted in spectacular increases in the incidence of legal abortion throughout Eastern Europe."

In Hungary, the interruption of pregnancy on request became law in 1956, they said, and since that time legal abortions increased rapidly until 1959 they exceeded the number of live births.

The authors also said that "it appears certain that the total numbers of criminal abortions have declined substantially."

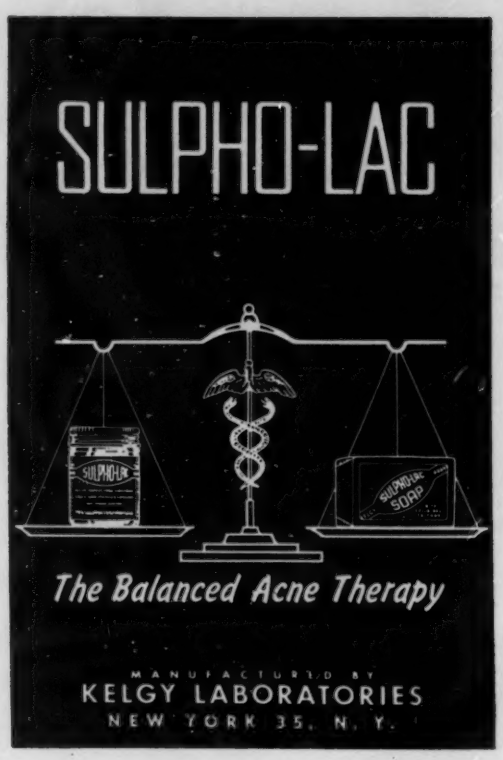
"Nevertheless," they said, "criminal abortions still occur in Eastern Europe with sufficient frequency to be considered a serious public health problem."

Legalization, by increasing the number of abortions, has resulted in an increased number of conceptions, the authors pointed out.

Deaths associated with legal abortion have been "exceedingly low," they reported.

The attitude of society toward induced abortion is a social and moral issue, the authors concluded, but one that should not be clouded by unfounded claims as to the inherent dangers of the procedure.

Dr. Tietze is director of research, National Committee on Maternal Health, Inc. Dr. Lehfeldt is chief of the contraceptive clinic, Bellevue Hospital.





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- **acts in 5-15 minutes**
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1. Blank, P., and Boas, H.: Improved analgesia for moderate pain, Ann. West. Med. & Surg. 6:376, 1952. 2. Bonica, J. J., et al.: The management of postpartum pain with dihydrohydroxycodeinone (Percodan): Evaluation with codeine and placebo, West. J. Surg. 65:84, 1957. 3. Cass, L. J., and Frederick, W. S.: A controlled study in pain relief, M. Times 84:1318, 1956. 4. Chasko, W. J.: Pain-free dental surgery: Postoperative extension of the pain-free state, J. District of Columbia Dent. Soc. 31:3, No. 5, 1956. 5. Cozen, L.: Office Orthopedics, ed. 2, Philadelphia, Lea & Febiger, 1953, pp. 120, 138, 145, 156, 234. 6. Nicolson, W. P., Jr., and Skandalakis, J. E.: Control of postoperative pain, J.M.A. Georgia 46:471, 1957. 7. Piper, C. E., and Nicklas, F. W.: Percodan for pain in industrial practice, Indust. Med. 23:510, 1954; abstracted, Clin. Med. 3:1008, 1956, Current M. Digest 22:135, No. 3, 1955.

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DIAGNOSIS, PLEASE

(*Answer from page 33a*)

CANCER OF MID THIRD OF ESOPHAGUS. Note the marked constant filling defect, which has produced considerable narrowing with eccentric lumen.

WHO IS THIS DOCTOR?

(Answer from page 63a)

JOHN F. FULTON

MEDIQUIZ

(Answers from page 77a)

1(D), 2(D), 3(E), 4(D), 5(A), 6(E), 7(E), 8(E), 9(C), 10(E), 11(C), 12(A), 13(B), 14(E), 15(C).

WHAT'S YOUR VERDICT?

(Answer from page 66a)

The Supreme Court sustained the judgment of the trial court, holding: "Since in the medical mind the arachnoiditis of the patient could arise either from a negligent or non-negligent injection of the anesthetic, the burden cast upon the patient to establish that the surgeon was negligent simply is not met. In a case in which the evidence discloses two or more possible causes for an injury, for only one of which a physician is responsible, liability does not attach unless the evidence discloses that the cause for which he is responsible is the more probable."

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new calming agent with mild sedative effect

■ helps the cardiac or hypertensive patient slow down to the safer pace you recommend ■ controls the agitation and tension that aggravate his condition ■ calms the patient and helps him get to sleep more easily ■ relatively free of side effects ■ low in cost, particularly when long-term or adjunctive therapy is indicated

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references: (1) Hirshleifer, L.: Adjunctive therapy in cardiacs, presented at the Spring Scientific Symposium, Connecticut Acad. Gen. Pract., Hartford, Conn., March 16, 1961. (2) Frohman, I. P.: The Alleviation of Stress in the Elderly Cardiac Patient, **ibid.** (3) Kent, E. A.: Management of the Hyperactive Geriatric Patient, **ibid.**

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1. Walker, M. H.: The Therapeutic Use of a Corticosteroid-Antibiotic-Enzyme Ointment in Common Foot Lesions, to be published.
2. Cornbleet, T., and Chesrow, E. J.: Arch. Dermat. *82*:261, 1960.
3. Irgang, S.: Harlem Hospital Bulletin, Annual Series 1, March, 1960, pp. 19-24.

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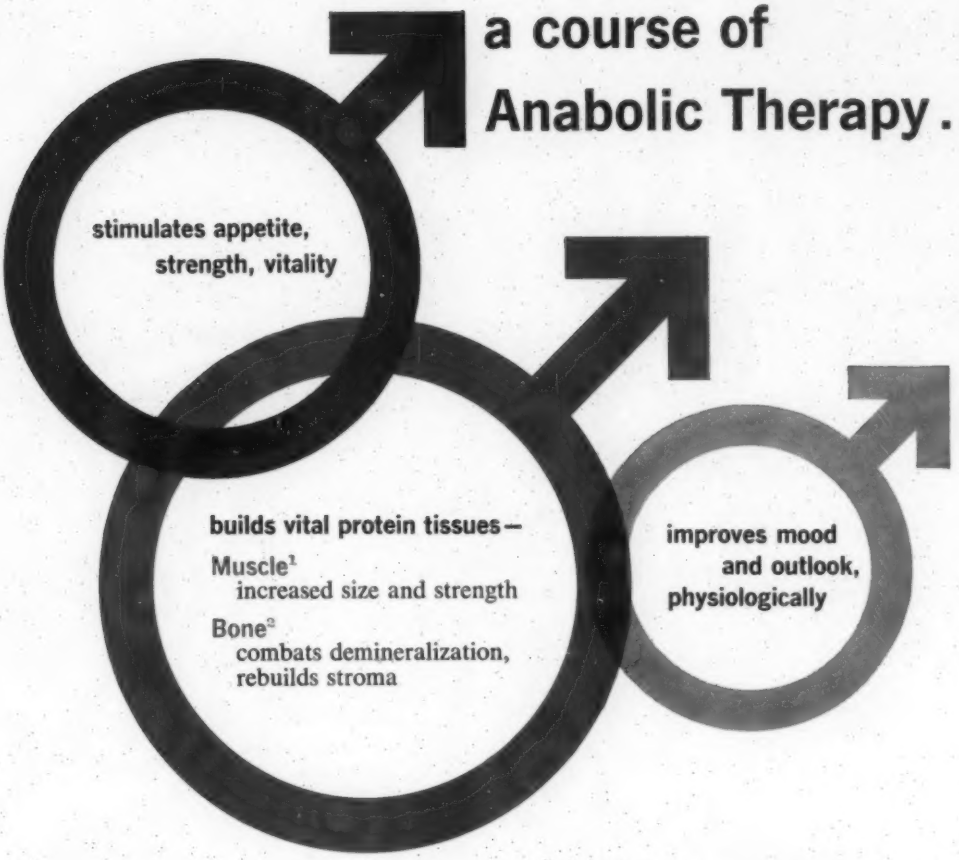
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1. Osol, A., and Farrar, G. E., Jr.: The Dispensatory of the U.S.A., ed. 25, J. B. Lippincott, Philadelphia, 1955, p. 1392.
2. Best, C. H. and Taylor, N. B.: The Physiologic Basis of Medical Practice, ed. 7, The Williams and Wilkins Co., Baltimore, 1961, p. 1104.

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Benztropine Methanesulfonate

for all forms of parkinsonism

Parkinson's disease does not have to mean a retreat from living or reluctance to face family and friends. Treatment with "COGENTIN often causes a diminution or disappearance of the typical parkinsonian facies. It has the ability to control severe tremor and may control sialorrhea better than atropine."[1] Severe rigidity, contractures, and frozen states also respond to COGENTIN.[2] Its prolonged action permits 24-hour control of symptoms with one bedtime dose.[3]

Before prescribing or administering COGENTIN, the physician should consult the detailed information on use accompanying the package or available on request. Supplied: Tablets COGENTIN (quarterscored), 2 mg., bottles of 100 and 1000. New dose form: Injection COGENTIN, 1 mg. per cc., ampuls of 2 cc., boxes of 6.

References: 1. Finkel, M. J.: M. Times 86:1391, 1958. 2. Doshay, L. J., and Boshes, L.: Postgrad. Med. 27:602, 1960. 3. A. M. A. Council on Drugs: New and Nonofficial Drugs 1960, Philadelphia, J. B. Lippincott Company, 1960, p. 264. COGENTIN is a trademark of Merck & Co., Inc.

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